

## REVISION OF AUSTRALIAN TORTRICINA.

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In 1881, I published in the Proceedings of this Society two papers, in which I dealt with the *Tortricina* of Australia and New Zealand, so far as then known to me. Excluding the New Zealand species (which are not now given, as I am revising them in a paper in course of publication in the Transactions of the New Zealand Institute), 132 Australian species were there recorded, to which I subsequently added a few more, whilst Mr. Lower has described a good many on various occasions. I am now enabled to record altogether about 434 species, of which about 232 are described as new, so that the progress made has been very considerable, and the character of the fauna can be fairly estimated.

For this excellent result I am greatly indebted to the aid of my Australian correspondents, who on learning that I contemplated this task, sent me a large quantity of most valuable material for examination; I appreciate most highly this generous assistance. Especially I would thank Mr. Geo. Lyell, of Gisborne, who not only sent a completely representative set of all species and varieties in his own extensive collection, but also took pains to get together additional material from his correspondents; the material collected by Miss M. Wise and Messrs. Berthoud, Bleaser, Drake, Findlay, Goudie, Hill, Jarvis, and Trebilcock was forwarded by him. Mr. O. Lower very kindly transmitted the types of all his described species (except two); this was of great importance, as I was thereby enabled to identify them with certainty. Dr. A. J. Turner sent a very useful representative collection of Southern Queensland species. In all, more than twenty collectors have at one time or another

contributed to the following records, acknowledgment being made in each instance; records of locality are attributed to the collector from whom they were first received; the collector's name (added in brackets) must be understood to refer to all those localities in the same State which precede it without the intervention of another collector's name; if no name is given, the observation is my own, except in the case of a few records from the islands, where the collector's name is unknown to me. The South Australian and West Australian species were collected principally during my journeys in 1882 and 1886 respectively.

This paper includes full characters of all families and genera, with partial synonyms of genera (so far as seemed useful to Australian students); a catalogue of all species, with full Australian synonymy; descriptions of all new species, with additional notes or supplementary descriptions in the case of species previously but unsufficiently described; full records of localities; and short recitals of larval habits when recorded, or full particulars if new. Tabulations of the genera are given, but I have not attempted tabulations of the species, because in those genera where they would be most needed, it seemed impossible to make them of practical value; the species are so similar, the colouring so obscure, and the markings often so irregular, indefinite, and variable, that it is impracticable to state distinctions and base categories on a single concise phrase. An attempt to do so in the case of *Capua* and *Tortrix*, for instance, would have been more likely to mislead than to edify. The group is admittedly a difficult one, and there is no easy road to its comprehension; students are advised to study the descriptions closely, and, in the case of nearly related species, to notice particularly the slight structural differences in the secondary sexual characters. Any collector who comes across one of the more local species will do well to devote attention to securing a good series of it, with a view to its proper comprehension. Little has yet been done towards studying the larval habits, and it is much to be desired that collectors should give more time to this, which would well repay them; probably many

of the larvæ feed internally in flower-heads, fruits, stems, or roots.

Owing to the difficulty of the subject, insufficient material, and the bad condition of many of Walker's types in the British Museum, I now find that in my former paper I wrongly identified some of Walker's species. For the purpose of the present paper I carried up my whole material to the British Museum, and made a close comparison with Walker's types, and believe that I have now identified every one of these satisfactorily. The synonymy given in this paper should, therefore, be taken as correcting and superseding that given formerly.

I have also modified my conceptions of certain genera; in particular, I have discarded the presence or absence of a costal fold in the ♂ as a distinctive character, finding that it tended to separate forms otherwise closely related and more naturally placed together, whilst intermediate species occurred in which the fold was in such a rudimentary condition that they might equally well be placed in either class. I consider also that the costal fold and its contained hair-pencil can only be regarded as a particular example of a class of structures which, being intended for sexual recognition and excitement, are essentially specific and not generic in character; and I hold, therefore, that similar tufts and folds occurring in other positions (such as the dorsum of hindwings) are equally unfitted for use as generic distinctions. I do not, however, apply this to other secondary sexual characters, which are not concerned with specific discrimination, such as the structure of the antennæ in the male; the ciliations of these, for example, are evidently necessary to the male and not to the female, and there can be little doubt that by means of them the male apprehends the female, but there is no reason to doubt also that if the male of one species of *Capna* could be equipped with the antennæ of another species, they would serve him equally well, whilst the costal hair-pencil of another species would emit a wrong scent, and would therefore not serve him at all. It will be observed, however, that in some genera, as now limited, the costal fold is as a matter of fact

always present, whilst in many others, even in some of the largest (e.g., *Argyroploce*, of which I am acquainted with about 200 species) it is always absent.

I consider the *Tortricina* to have originated from the *Hilaro-grapha*-group of the *Plutellidæ*, and the connecting links are now, in my opinion, pretty well ascertained. The *Chlidanotidæ* and *Eucosmidæ* started as two collateral lines of development, but the *Chlidanotidæ* never came to much. *Laspeyresia* was the earliest form of the *Eucosmidæ*, and the *Argyroploce*-group sprang immediately from this. From the *Argyroploce*-group originated the *Peronea*-group of the *Tortricidæ*, and the *Carposinidæ* are a specialised development of the *Peronea*-group. The *Phaloniadæ* are an independent offshoot from an early form of the *Tortricidæ*.

*Tabulation of Families.*

1. Vein 2 of forewings from beyond $\frac{3}{4}$ of cell.....	2.
Vein 2 of forewings from before $\frac{3}{4}$ of cell..... ..	3.
2. Hindwings with 5 absent... ..	1. CARPOSINIDÆ.
Hindwings with 5 present..... ..	2. PHALONIADÆ.
3. Hindwings with basal pecten of hairs on lower margin of cell..... ..	4. EUCOSMIDÆ.
Hindwings without such pecten..... ..	4.
4. Forewings with 8 and 9 stalked or coincident; hindwings with 5 parallel, 6 and 7 stalked..	5. CHLIDANOTIDÆ.
Forewings with 8 and 9 rarely stalked, and if stalked, then with 5 of hindwings approximated to 4 at base..... ..	3. TORTRICIDÆ.

1. CARPOSINIDÆ.

Ocelli absent. Forewings with tufts of scales on surface; 2 from posterior fifth to cell, 7 to termen, separate. Hindwings with or without basal pecten on lower margin of cell; 5 absent; 6 usually absent or rudimentary, parallel to 7 when present, 7 to apex.

The elongate wings, tufts of forewings, and peculiar neuration of hindwings make this family easy of recognition. Some of the species are so narrow-winged that even an expert may easily overlook them as not belonging to the *Tortricina*. The larvæ

probably all feed in fruits, shoots, or bark. The main development of the family is in the Australasian region and Pacific islands.

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| 1. Vein 6 of hindwings developed.....  | 6. SOSINEURA.     |
| Vein 6 of hindwings reduced to a fold or absent.....   | 2.                |
| 2. Second joint of palpi in ♂ with long curled hairs,<br>in ♀ cylindrical with rough scale-projection<br>towards base above..... | 5. COSCINOPTYCHA. |
| Second joint of palpi not so formed.....   | 3.                |
| 3. Hindwings with basal pecten on cell.....  | 4.                |
| Hindwings without basal pecten on cell.....  | 5.                |
| 4. Forewings with 8 and 9 stalked.....   | 2. MERIDARCHIS.   |
| Forewings with 8 and 9 separate.....   | 3. CARPOSINA.     |
| 5. Palpi in ♂ subascending, terminal joint moderate; 3<br>and 4 of hindwings usually separate.....                               | 1. BONDIA.        |
| Palpi in ♂ porrected, terminal joint short, 3 and 4<br>of hindwings stalked.....   | 4. PARAMORPHA.    |

1. BONDIA Newm.

*Bondia* Newm., Trans. Ent. Soc. Lond.(n.s.) iii., 289  
(1856) ... .. type *B. nigella*.

Antennæ in ♂ with long fine ciliations (4-5). Palpi in ♂ moderately long, more or less ascending, in ♀ very long, porrected, second joint densely rough-scaled above and beneath, terminal moderate, slender, obtuse, exposed. Forewings: 8 separate. Hindwings without basal pecten on cell; 3 and 4 separate or nearly connate (in *B. digramma* stalked), 6 absent.

All the species are narrow-winged insects of blackish colouring, and frequent the trunks of *Eucalyptus*, being specially assimilated to their appearance when charred by bush fires; which would seem to prove that such fires must be of very ancient occurrence to allow time for the development of a genus of several species wholly adapted to them. The genus is confined to Australia.

1. *B. caseata*, n.sp.

♂♀. 17-20 mm. Head, palpi, and thorax blackish, sometimes slightly whitish-sprinkled. Abdomen blackish, anal tuft in ♂ light yellowish. Forewings elongate, narrow, hardly dilated, costa slightly arched, apex round-pointed, termen slightly rounded, very oblique;

dark ashy-fuscous irrorated with black, mixed throughout with golden-lead-metallic, more brilliant in ♂; a small light ochreous-yellow spot in disc at  $\frac{2}{3}$ : cilia fuscous mixed with black. Hindwings with 3 and 4 separate or almost connate; in ♂ orange-yellow, in ♀ light ochreous-yellow; costa narrowly suffused with dark fuscous; a dark fuscous apical spot extending over about  $\frac{1}{6}$  of wing, in ♂ sometimes very slenderly produced along upper part of termen, in ♀ forming a narrow irregular streak or rather broad fascia variable in extent; subdorsal hairs blackish; cilia dark fuscous.

VICTORIA: Melbourne(Raynor), Gisborne(Lyell)—SOUTH AUSTRALIA: Mount Lofty, Mount Gambier(Guest); from December to March, six specimens. Formerly confused with *B. dissolutana*; the distinguishing characters are noted under that species.

### 2. *B. dissolutana* Meyr.

(*Bondia dissolutana* Meyr., Proc. Linn. Soc. N. S. Wales, 1882, 182.)

The description should be amended in the following particulars:

Forewings in ♂ mixed throughout with bright golden-lead-metallic. Hindwings in ♂ with apical dark fuscous spot extending over  $\frac{1}{4}$  of wing, produced as a moderate irregular fascia along termen to below middle; in ♀ pale grey, more or less tinged with yellow-whitish in disc, suffused with grey towards apex and along upper part of termen.

NEW SOUTH WALES: Blackheath, 3500 feet, in October. The supposed Melbourne record refers to the preceding species. Differs from *B. caseata* by the absence of yellow discal spot of forewings, the anal tuft of ♂ dark fuscous instead of yellowish, the hindwings in ♀ not yellow, and in ♂ with more extended dark apical patch.

### 3. *B. attenuatana* Meyr.

(*Bondia attenuatana* Meyr., Proc. Linn. Soc. N.S. Wales, 1882, 183.)

NEW SOUTH WALES: Parramatta, in June and July. This inconspicuous winter species is very probably overlooked by collectors.

4. *B. maleficana* Meyr.

(*Bondia maleficana* Meyr., Proc. Linn. Soc. N. S. Wales, 1882, 183.)

QUEENSLAND: Brisbane, in July and August (Turner)—NEW SOUTH WALES: Sydney, Parramatta, from September to November and in March.

5. *B. nigella* Newm.

(*Bondia nigella* Newm., Trans. Ent. Soc. Lond.(u.s.) iii., 289; Meyr., Proc. Linn. Soc. N.S. Wales, 1882, 182.)

QUEENSLAND: Brisbane (Turner)—NEW SOUTH WALES: Glen Innes (3500 feet), Sydney—VICTORIA: Gisborne (Lyell), Mount Alexander, Healesville—TASMANIA: Hobart—SOUTH AUSTRALIA: Mount Lofty, Hoyleton, Mount Gambier (Guest); from May to October.

6. *B. digramma*, n.sp.

♂♀. 13-15 mm. Head, palpi, and thorax dark fuscous, slightly whitish-sprinkled. Abdomen pale grey. Forewings elongate, narrow, hardly dilated, costa slightly arched, apex round-pointed, termen very oblique, slightly rounded; dark shining leaden-grey, sprinkled with blackish; five cloudy irregular transverse blackish streaks, last subterminal, and additional small blackish spots on costa in middle and before apex; a transverse linear whitish mark in disc at  $\frac{3}{5}$ , its upper end right-angled anteriorly and suffused with yellow-ochreous, and a transverse whitish mark rather before it above dorsum; in one ♀ a white transverse line following first blackish streak, some white suffusion in disc before middle, and lower posterior white mark enlarged and connected with upper: cilia grey mixed with black. Hindwings with 3 and 4 stalked; grey-whitish, suffused with grey posteriorly and on lower margin of cell; cilia grey-whitish, suffused with grey round apex and upper half of termen.

WEST AUSTRALIA: Albany, from September to December; five specimens. Differs from all by stalking of veins 3 and 4 of hindwings, and whitish markings of forewings. I regard this as the most ancestral form, and think the genus probably originated in West Australia.

## 2. MERIDARCHIS Zell.

*Meridarchis* Zell., Stett. E. Zeit. 1867, 407(1867). ...

... type *trapeziella*.

*Pexinola* Hampson, Cat. Lep. ii., 79(1890) ... type *longirostris*.

Antennæ in ♂ with long fine ciliations (4-5), basal joint stout. Palpi in ♂ moderately long, in ♀ very long, porrected, second joint with dense projecting scales above and beneath, terminal very short, exposed. Forewings: 8 and 9 stalked. Hindwings with basal pecten on cell; 3 and 4 connate or stalked, 6 absent.

A characteristic Indo-Malayan genus; I am acquainted with about ten species from that region. It is doubtless a development of *Carposina*.

7. *M. zymota*, n.sp.

♂. 16 mm. Head, palpi, and thorax whitish-ochreous irrorated with grey, base and lower longitudinal half of palpi black. Abdomen grey, anal tuft whitish-ochreous. Forewings elongate, rather narrow, posteriorly somewhat dilated, costa hardly arched except towards apex, apex obtuse, termen nearly straight, oblique; whitish-ochreous, irregularly irrorated with fuscous and dark fuscous, somewhat suffused with brownish-ochreous towards costa and on veins; seven more or less elongate marks of blackish irroration on costa; several small ochreous-brownish spots in disc, accompanied by raised tufts; two or three spots of blackish suffusion towards upper angle of cell, and a black dash beneath costa beyond these; some undefined dark fuscous marks round apex and termen: cilia fuscous, irrorated with pale whitish-ochreous. Hindwings rather thinly scaled, grey; cilia grey.

N. GUINEA: Woodlark Island, in April (Meek); one specimen.

## 3. CARPOSINA HS.

*Carposina* HS., Schm. Eur. v., 38(1855) ... type *berberidella*.

*Enopa* Walk., Cat. xxxv., 1738(1866) ... type *mediella*.

*Oistophora* Meyr., Proc. Linn. Soc. N.S. Wales,

1881, 699(1881) ... .. type *mediella*.

*Heterocrossa* Meyr., Proc. Linn. Soc. N.S. Wales,

1882, 178(1882) ... .. type *adireptella*.



Antennæ in ♂ with moderate or long ciliations (1-4). Palpi rather long or very long, longer in ♀, porrected, second joint with projecting scales above and beneath, terminal more or less concealed. Forewings: 8 separate. Hindwings with basal pecten on cell, sometimes in ♂ developed into a large expansible tuft of hairs; 3 and 4 stalked, 6 absent.

The largest genus of the family, with an interesting distribution, the species at present known comprising 2 from Europe, 1 Maderia, 2 North America, 12 Australia, 8 New Zealand, and 33 Hawaiian Islands, indicating an ancient South Pacific (probably Australian) origin; the case is analogous to that of the Pyralid genus *Scoparia*. The few larvæ known feed in fruits and shoots.

8. *C. mediella* Walk.

(*Enopa mediella* Walk., Cat. xxxv., 1738; *Oistophora pterocosmana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 699.)

VIC.: Melbourne (Raynor)—TASM.: Deloraine—S. AUST.: Mount Lofty (Guest)—W. AUST.: Albany; in November and December. My Sydney record is erroneous, and refers to the following species; the distinguishing characters are given below. This and the next species are the only two known to possess the large expansible tuft of hindwings, but some of the others are only known in the female sex. The female does not possess this tuft; otherwise it resembles the male.

9. *C. taractis*, n.sp.

♂♀. 18-19 mm. Head whitish, in ♀ tinged with ochreous. Palpi in ♂ dark fuscous, in ♀ ochreous mixed with dark fuscous, upper hairs white. Antennæ in ♂ shortly ciliated (1). Thorax white, collar and shoulders brown, in ♀ dorsally spotted with brownish. Abdomen whitish-ochreous, segmental margins white. Forewings elongate, narrow, posteriorly dilated, costa gently arched, apex round-pointed, termen almost straight, oblique; whitish, irregularly mixed with ochreous-fuscous, and thinly sprinkled with black; a black dot near base in middle, and a blackish dot beyond it towards dorsum; a small blackish mark

on costa at  $\frac{1}{6}$ , another at  $\frac{1}{3}$ , and five blackish strigulae between this and apex; several small ochreous-fuscous spots accompanied by tufts of scales in disc; a fine blackish terminal line: cilia whitish sprinkled with fuscous, on basal half indistinctly barred. Hindwings in ♂ with expansible scale-tuft not reaching  $\frac{1}{3}$  of wing, thicker and broader than in *C. mediella*; whitish, in ♀ posteriorly greyish-tinged, tuft and dorsal area in ♂ tinged with ochreous; cilia whitish.

N.S.W.: Sydney, in October and April; two specimens. Differs from *C. mediella* by character of tuft of hindwings, which in *C. mediella* extends from base to fully  $\frac{1}{3}$ , and forms a very long dense pecten rather than a broad tuft; also by less oblique termen of forewings, and absence of distinct black dots in disc.

10. *C. nesolocha*, n.sp.

♀. 14-16 mm. Head white. Palpi extremely long, light brownish-ochreous more or less suffused with white above, base and lower longitudinal half dark fuscous. Thorax white, with anterior transverse series of four black dots. Abdomen pale whitish-ochreous. Forewings elongate, narrow, posteriorly hardly dilated, costa gently arched, apex round-pointed, termen straight, very oblique; whitish-ochreous slightly tinged with brownish, with some scattered black scales, becoming yellowish-white towards base and anterior half of costa; a sharp black almost basal dot in middle, one towards dorsum near base, and one beneath costa at  $\frac{1}{6}$ ; two small black strigulae on costa before and in middle; a small blackish spot beneath fold before  $\frac{1}{3}$ , and one above fold beyond  $\frac{1}{3}$ ; a round blackish spot partially edged with whitish above fold before middle, another more distinctly white-edged on upper angle of cell, and a third less marked on lower angle of cell, between these in middle of disc is a transverse grey blotch, and beyond upper angle of cell a small patch of grey suffusion; some light grey irroration towards posterior half of costa and termen; some indistinct blackish dots on termen: cilia grey irrorated with whitish, with two darker lines. Hindwings pale grey; cilia grey-whitish

W. Austr.: Geraldton, in November; two specimens.

11. *C. autologa*, n.sp.

♀. 22 mm. Head white. Palpi extremely long, fuscous irrorated with dark fuscous, second joint white above. Thorax ochreous-white, with anterior transverse series of four blackish dots. Abdomen pale whitish-ochreous. Forewings elongate, narrow, posteriorly dilated, costa gently arched, apex round-pointed, termen slightly sinuate, very oblique; ochreous-whitish, becoming whitish-ochreous posteriorly, posterior half with a few scattered blackish scales; an ochreous-brown costal streak from base to beyond middle, suffused towards costa with dark grey; a black dot towards dorsum near base; a small blackish spot towards dorsum at  $\frac{1}{3}$ , and a dot above fold beyond it; a small blackish spot in middle above fold, followed by a transverse blotch of grey suffusion; a small blackish spot on upper angle of cell and a dot on lower angle, connected by light brownish-ochreous suffusion; some brownish-ochreous and grey suffusion towards costa posteriorly and termen, and four undefined small blackish-grey spots on posterior half of costa; a cloudy angulated transverse streak of brownish-ochreous and fuscous suffusion about  $\frac{1}{2}$ ; a black line along termen: cilia fuscous irrorated with whitish, with two darker shades. Hindwings whitish-grey; cilia grey-whitish.

W. AUSTR.: Geraldton, in November; one specimen. Very similar to *C. nesolochia*, but differs by larger size, forewings more dilated posteriorly, termen distinctly sinuate, brown costal streak, black terminal line, and absence of black median dot near base. It is certainly distinct, and though nominally obtained at the same place and time, I took it actually in a different locality from the two examples of the preceding species, which were captured together.

12. *C. mimodes*, n.sp.

♂. 23. mm. Head whitish, crown irrorated with pale fuscous, collar marked with dark fuscous. Antennal ciliations 3. Palpi extremely long, white irrorated with pale fuscous, lower longitudinal half suffused with blackish. Thorax ochreous-whitish,

partially tinged with pale ochreous. Abdomen ochreous-whitish. Forewings elongate, narrow, posteriorly dilated, costa gently arched, apex round-pointed, termen slightly sinuate, rather strongly oblique; light yellow-ochreous, indistinctly streaked between veins with white mixed with fuscous, with a more distinct white subcostal streak from base to middle; costal edge suffused with dark fuscous from base to middle; a black dot in disc at  $\frac{1}{3}$ , another obliquely before it beneath fold, a third before middle above fold, and two at angles of cell; an elongate patch of fuscous irroration mixed with whitish in posterior half of cell; three slight marks of blackish irroration on costa posteriorly, and a row of indistinct minute dots along termen: cilia grey-whitish finely sprinkled with blackish, base ochreous-tinged. Hindwings whitish-grey, paler anteriorly; cilia whitish, round apex greyish-tinged.

W. AUST.: York, in October; one specimen. Superficially much like *C. mediella*, but differs structurally by the much longer antennal ciliations and palpi, and the absence of the expansible tuft of hindwings.

13. *C. telesia*, n.sp.

♀. 20 mm. Head and thorax whitish irrorated with grey. Palpi extremely long, dark grey irrorated with whitish, upper edge whitish. Abdomen ochreous-grey-whitish, with a dark fuscous spot on back at base. Forewings elongate, narrow, posteriorly dilated, costa gently arched, apex round-pointed, termen straight, rather strongly oblique; light brown, irregularly mixed with grey, especially in disc; a small blackish dot near base in middle, and another beyond it near dorsum; a blackish dot in disc at  $\frac{1}{3}$ , and one before it beneath fold, placed in an oblique brownish mark partially outlined with whitish; a small indistinct whitish ring above middle of disc; an indistinct blackish dot below middle of disc; two indistinct blackish dots placed in a brown mark partially edged with whitish traversing end of cell; some slight whitish irroration between veins posteriorly; five indistinct dots of blackish irroration on posterior half of

costa; a terminal series of small dots of black irroration: cilia light fuscous finely sprinkled with whitish. Hindwings pale grey; cilia grey-whitish.

W. AUST.: Albany, in September; one specimen.

14. *C. orphania*, n.sp.

♀. 20 mm. Head and thorax dark fuscous, face irrorated with whitish. Palpi very long, light fuscous irrorated with blackish. Abdomen grey. Forewings elongate, narrow, posteriorly dilated, costa gently arched, apex round-pointed, termen slightly rounded, rather strongly oblique; fuscous suffusedly irrorated with dark fuscous, bases of scales more or less distinctly paler; posterior half of costa with several suffused darker spots followed by pale dots; an elongate blotch of dark suffusion in posterior half of cell, terminated by an obscure pale curved line; usual tufts darker and obscurely pale-edged posteriorly: cilia fuscous mixed with dark fuscous. Hindwings and cilia whitish-fuscous.

S. AUST.: Mount Lofty, in May(Lower); one specimen.

15. *C. petraea*, n.sp.

♂♀. 20-23 mm. Head and thorax whitish, shoulders slightly marked with fuscous. Antennal ciliations in ♂ 1. Palpi very long, longer in ♀, whitish, lower longitudinal half dark fuscous. Abdomen ochreous-whitish, dorsal scales in ♂ modified on median third and slightly ochreous-tinged. Forewings elongate; in ♂ rather narrow, little dilated, in ♀ narrow, moderately dilated posteriorly, costa slightly arched, apex round-pointed, termen almost straight, in ♂ rather strongly oblique, in ♀ very oblique; light fuscous mixed with darker fuscous and whitish, towards anterior half of costa more or less suffused with whitish; six small spots of dark fuscous irroration on posterior  $\frac{2}{3}$  of costa; normal tufts dark fuscous preceded by yellow-ochreous suffusion, viz., one beneath fold near base, one in disc at  $\frac{1}{3}$ , one beneath fold obliquely before it, one beneath middle of disc, and two at angles of cell: cilia whitish irrorated with fuscous and dark fuscous. Hindwings whitish-grey; cilia whitish; in ♂ with a

long whitish hair-pencil from base of dorsum becoming ferruginous-ochreous towards apex.

VIC.: Gisborne (Lyell)—S. AUST.: Mount Lofty (Guest); in November; two specimens.

16. *C. neurophorella* Meyr.

(*Epischnia neurophorella* Meyr., Proc. Linn. Soc. N. S. Wales, 1879, 232.)

Originally based on a single female; I therefore now describe a fine male in Mr. Lyell's collection, the species being little known.

♂. 20 mm. Head and thorax whitish, longitudinally streaked above with dark fuscous. Antennal ciliations 1. Abdomen grey-whitish. Forewings elongate, narrow, posteriorly little dilated, costa gently arched, apex obtuse, termen very obliquely rounded; whitish, partially tinged with yellow-ochreous; all veins marked with well-defined streaks of dark fuscous irroration; blackish raised dots in disc at  $\frac{1}{3}$ , beneath fold before this, below middle of disc, and two more conspicuous black marks on angles of cell: cilia whitish irrorated with dark grey. Hindwings grey-whitish, towards base and dorsum suffused with pale whitish-ochreous, hairs of 1b curled; cilia whitish.

N.S.W.: Sydney—VIC.: Melbourne (Lyell)—S. AUST.: Mount Lofty (Guest); in August, September, and December. Mr. Lyell has taken it "emerging from trunk of *Casuarina*"; I presume the larva fed in the bark; the association with *Casuarina* accounts for the longitudinal striping of the wings, which is frequent in *Lepidoptera* attached to that tree, being adapted to resemble the light and shade effects of the slender twigs.

17. *C. pinarodes*, n.sp.

♂. 23 mm. Head and thorax whitish-ochreous, thorax with some small marks of dark fuscous irroration. Antennal ciliations  $1\frac{1}{2}$ . Palpi extremely long, whitish-ochreous, lower half suffused with dark fuscous except at base. Abdomen ochreous-whitish. Forewings elongate, narrow, posteriorly dilated, costa

gently arched, apex round-pointed, termen almost straight, oblique; whitish-ochreous, irregularly sprinkled with blackish; a small black dot near base in middle, one towards dorsum beyond it, and a larger one beneath costa at  $\frac{1}{3}$ ; a streak of blackish irroration along costa from beyond this to near middle, and six small spots or dots of blackish irroration on costa posteriorly; cloudy dark fuscous dots suffused with brownish-ochreous in disc at  $\frac{1}{3}$ , beneath fold before this, and beneath middle of disc, and irregular spots of blackish irroration between and around these; a brownish-ochreous streak across end of cell, marked at upper extremity with a dark fuscous dot, and preceded by a transverse cloud of blackish irroration, extended irregularly to costa and dorsum at  $\frac{2}{3}$ ; a transverse series of undefined marks of blackish irroration from  $\frac{3}{4}$  of costa to tornus; termen dotted with blackish irroration: cilia pale fuscous, somewhat mixed with dark fuscous and sprinkled with whitish. Hindwings grey-whitish; cilia whitish.

W. AUST.: Albany, in October; one specimen.

18. *C. lutebrosa*, n.sp.

♂. 15-16 mm. Head, palpi, thorax, and abdomen pale whitish-ochreous; palpi extremely long, lower longitudinal half suffused with dark fuscous, upper edge whitish; antennal ciliations 1. Forewings elongate, narrow, posteriorly rather dilated, costa gently arched, apex round-pointed, termen almost straight, very oblique; very pale whitish-ochreous, more or less sprinkled with fuscous except towards costa anteriorly; a minute black dot near base in middle, and a larger one beneath costa at  $\frac{1}{7}$ ; six oblique blackish strigulae or dots on posterior  $\frac{2}{3}$  of costa, first sometimes thick; an inconspicuous dark fuscous dot in disc at  $\frac{1}{3}$ , another obliquely before it beneath fold, and one more distinct at upper angle of cell; a series of dark fuscous marks or dots along termen: cilia whitish sprinkled with fuscous. Hindwings with hairs on margin of cell and 1♂ long and bristly, slightly tinged with ochreous; whitish; cilia whitish.

TASM.: Deloraine; in December; two specimens.

19. *C. perileuca* Low.

(*Paramorpha perileuca* Low., Trans. Roy. Soc. S. Aust. xxxii. (1908), 116.)

♂♀. 14 mm. Head, thorax, and abdomen white. Antennal ciliations in ♂  $2\frac{1}{2}$ . Palpi in ♂ long, in ♀ very long, white, lower half dark fuscous. Forewings elongate, narrow, posteriorly somewhat dilated, costa slightly arched, apex round-pointed, termen almost straight, rather strongly oblique; white, thinly sprinkled with dark fuscous or blackish; a short black dash beneath costa near base, and a black dot towards dorsum near base; six oblique black marks on posterior  $\frac{2}{3}$  of costa; an oblique dark fuscous mark in disc at  $\frac{1}{3}$ , another beneath fold before this, a somewhat curved sometimes interrupted longitudinal line above middle of disc, and an elongate dot below middle of disc; an angulated subterminal series of undefined spots or marks of dark fuscous irroration; a blackish line along termen: cilia whitish, with two broad fuscous shades. Hindwings and cilia whitish.

N.S.W.: Sydney—VIC.: Gisborne(Lyell), Melbourne, Castle-maine(Lower); always in March. Redescribed from Lower's type (a ♀, not ♂ as stated) and three other specimens.

## 4. PARAMORPHA MEYR.

*Paramorpha* Meyr., Proc. Linn. Soc. N.S. Wales, 1881,

696 ... .. type *aquilina*.

Antennæ in ♂ strongly ciliated (2-2 $\frac{1}{2}$ ). Palpi in both sexes very long, porrected, second joint with rough projecting scales above and beneath, terminal short, exposed. Forewings: 8 separate. Hindwings without basal pecten on cell; 3 and 4 stalked, 6 absent.

Besides the four Australian species, I have six Indo-Malayan. The Australian forms are small whitish insects of similar appearance, and there has been some confusion between them.

20. *P. semotheta*, n.sp.

♂♀. 13-18 mm. Head, palpi, and thorax white, in Sydney form more or less suffused with grey, oblique basal half of palpi



dark fuscous. Abdomen ochreous-whitish. Forewings elongate, narrow, somewhat dilated posteriorly, costa gently arched, apex obtuse, termen slightly rounded, very oblique; white, or in Sydney form grey-whitish, more or less irregularly irrorated with grey and sprinkled with dark fuscous; markings blackish-fuscous; a semioval spot on base of costa, and a subdorsal dot near base; six small spots on posterior  $\frac{2}{3}$  of costa; an inwards-oblique sometimes interrupted linear mark in disc beyond  $\frac{1}{4}$ ; a more or less defined elongate blotch above middle of disc, terminated by two small round spots partly edged with white; a small spot on fold before middle, and one on dorsum at  $\frac{1}{5}$ ; these markings are accompanied by raised tufts, and sometimes edged posteriorly with pale ochreous suffusion; a more or less indistinct irregular subterminal streak of dark suffusion; some very indistinct dark spots on termen: cilia whitish, with two or three cloudy grey shades, sometimes broken into bars. Hindwings and cilia whitish.

N.S.W.: Sydney, in September—TASM.: Mount Wellington, 3100 feet, in December; seven specimens. Specially characterised by the spot on base of costa.

21. *P. rhachias*, n.sp.

♂♀, 13-14 mm. Head and thorax white. Palpi white, base and lower longitudinal half dark fuscous. Abdomen in ♂ light grey, in ♀ whitish. Forewings elongate, rather narrow, rather dilated posteriorly, costa moderately arched, apex round-pointed, termen almost straight, rather strongly oblique; white, more or less faintly tinged with greyish-ochreous except towards costa anteriorly, with a few fine black specks, veins posteriorly marked with faint greyish-ochreous streaks; a short black strigula on costa beyond  $\frac{1}{3}$ , and five longer oblique black strigulae on posterior half of costa; a dot of ochreous-grey and black irroration accompanied by a tuft of scales beneath fold at  $\frac{1}{4}$ , another above fold at  $\frac{2}{5}$ , a third at lower angle of cell, and a small irregular blackish spot at upper angle of cell; a blackish line or series of marks along termen: cilia fuscous irrorated with whitish, paler towards tornus. Hindwings and cilia whitish-grey.

N.S.W.: Murrurundi, Sydney, in November and April; three specimens. Formerly confused with *P. aquilana*, from which it may be distinguished by the black costal strigula before middle, and the absence of the black discal dot at  $\frac{1}{3}$ .

22. *P. aquilana* Meyr.

(*Paramorpha aquilana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 697.)

N.S.W.: Blackheath, 3500 feet—VIC.: Melbourne, Gisborne (Lyell); in February and March. My Sydney record refers to *P. rhachias*, which is included in the original description; *P. aquilana* has no black strigula on costa before middle, and there is a sharp black dot in disc at or slightly before  $\frac{1}{3}$ ; it is also a narrower-winged insect than *P. rhachias*, and the termen is more oblique.

23. *P. hapalopsis*, n.sp.

♀. 15 mm. Head and thorax grey-whitish. Palpi white irrorated with pale grey, base and lower longitudinal half dark fuscous. Abdomen whitish-ochreous. Forewings elongate, narrow, posteriorly somewhat dilated, costa gently arched, apex acute, termen somewhat sinuate, very oblique; whitish, with scattered black specks, suffusedly irrorated with grey except towards base, becoming darker grey towards costa and posteriorly; a white subcostal streak from base to beyond middle, marked with a black dot near base, and edged beneath by a streak of dark fuscous suffusion except at base; cloudy whitish streaks between veins towards termen; a short line of black scales on termen above middle: cilia grey irrorated with whitish, paler towards tornus, tips mixed with dark fuscous towards middle of termen. Hindwings and cilia whitish.

W. AUST.: Albany, in September; one specimen. Distinct by the acute apex and absence of black dots.

5. *COSCINOPTYCHA* Meyr.

*Coscinoptycha* Meyr., Proc. Linn. Soc. N.S. Wales, 1881,

700 ... .. type *improbana*.

Antennæ in ♂ thickened-dentate, strongly ciliated (3), basal joint swollen. Palpi in ♂ moderately long, subascending, second joint densely rough-scaled beneath and clothed with long curled expansible hairs above, terminal very short, exposed; in ♀ very long, porrected, second joint evenly thickened with dense tolerably appressed scales, towards base above forming an abrupt rough projection, terminal moderate, exposed. Forewings in ♂ with longitudinal membranous bladder-like ridge in disc anteriorly, clothed with flap of dense scales; 8 separate. Hindwings without basal pecten on cell; 3 and 4 connate or short-stalked, 6 absent.

An endemic genus, containing only the single species.

24. *C. improbana* Meyr.

(*Coscinoptycha improbana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 701).

Q.: Brisbane(Turner)—N.S.W.: Sydney; from July to September, in December, January, and April.

6. *SOSINEURA*, n.g.

Antennæ in ♂ strongly ciliated (3), basal joint dilated. Palpi in ♂ moderate, subascending, in ♀ longer, porrected, with appressed scales expanded above towards apex, terminal joint very short, exposed. Forewings in ♂ with deep longitudinal groove in cell anteriorly, causing margins of cell to be approximated towards base; 8 separate. Hindwings in ♂ with large basal patch of modified scales, without basal pecten, in ♀ with basal pecten on cell; 3 and 4 stalked, 6 present, remote, parallel to 7 anteriorly.

Type *S. mimica* Low. This appears to be the most primitive form of the family at present known; the genus is endemic, and contains only one species.

25. *S. mimica* Low.

(*Heterocrossa mimica* Low., Trans. Roy. Soc. S. Austr. 1893, 168.)

N.S.W.: Sydney—VIC.: Melbourne(Kershaw), Gisborne(Lyell)—TASM.: Hobart(Lyell)—S. AUSTR.: Mount Lofty(Guest)—W

AUST.: Albany; from September to April. Lower's description is good and sufficient.

#### PHALONIADÆ.

Ocelli usually present. Forewings with 2 from posterior fifth of cell. Hindwings without basal pecten on lower margin of cell; 5 present, 7 to costa.

As thus limited, this family is characteristically European; about 200 species are known from that region, whilst elsewhere it is represented only by a few stragglers. Of the two Australian genera, *Heliocosma*, though endemic and distinct, is a normal exponent of the family; but *Hyperæna* presents dubious features.

#### 7. HELIICOSMA Meyr.

*Heliocosma* Meyr., Proc. Linn. Soc. N. S. Wales, 1881,

653      ...      ...      ...      ...      ... type *incongrua*.

Antennæ in ♂ broadly compressed and flattened. Palpi very long, porrected, second joint with rough projecting scales diminishing anteriorly, terminal moderately long, exposed. Thorax without crest. Forewings with scale-tufts on surface, 7 to termen, 8 separate. Hindwings with 3 and 4 remote, 5 parallel, 6 and 7 remote, nearly parallel.

At present only known from the Australian region; though similar to European forms, it differs from them all by the parallel veins 6 and 7 of hindwings, which are closely approximated or stalked in all European genera.

#### 26. *H. anthodes*, n.sp.

♂♀. 17-18 mm. Head and thorax in ♂ whitish-ochreous, tinged with crimson on face and shoulders, in ♀ yellower and more largely suffused with light crimson. Palpi crimson-whitish or light crimson, becoming fuscous towards apex, whitish towards base. Abdomen pale whitish-ochreous, in ♀ tinged with grey. Forewings elongate, narrow towards base, dilated posteriorly, costa slightly arched, more strongly posteriorly, apex round-pointed, termen sinuate, oblique; ochreous-whitish; a pale crimson

streak along costa from base to  $\frac{2}{3}$ , in ♀ broader and more suffused; a white streak running from beneath apex of this almost to dorsum beyond middle, whole anterior area of wing yellow-ochreous, becoming deeper and brownish-tinged just before the white streak; in ♂ undefined patches of pale whitish-rosy suffusion before and beyond tornus and on costa before apex, post-tornal patch edged above and costal beneath by marks of yellow-ochreous suffusion, and some yellowish suffusion in disc before these; in ♀ the whole posterior area is suffused with light crimson, except white wedge-shaped marks resting on termen below apex and below middle: cilia in ♂ whitish partially tinged with pale rosy, in ♀ wholly pale crimson. Hindwings in ♂ whitish-grey, in ♀ grey; cilia grey-whitish.

W. AUST.: York, in October; two specimens.

27. *H. rhodopnoana* Meyr.

(*Heliocosma rhodopnoana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 694.)

The ♂ (not hitherto described) is similar to the ♀, but varies considerably in the development of the crimson colouring, the groundcolour varying from ochreous with a faint rosy tinge to rose-pink, but not so deep or bright as in ♀.

VIC.: Melbourne(Raynor), Gisborne(Lyell)—TASM.: George's Bay—S. AUST.: Mount Lofty(Guest)—W. AUST.: Perth, Albany; from November to January.

28. *H. incongruana* Walk.

(*Conchylis incongruana* Walk., Cat. xxviii., 363; *Eromene apertella* ib. xxxv., 1762; *Heliocosma incongruana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 695.)

Q.: Duinga (Barnard), Warwick, Stradbroke I.(Turner)—N.S.W.: Tenterfield (Turner), Blackheath (3500 feet), Sydney—VIC.: Gisborne, Beaconsfield(Lyell), Wandin(Jarvis), Melbourne—TASM.: Deloraine, George's Bay, Hobart—S. AUST.: Mount Lofty(Guest); from September to April. Larva in a portable case on flowers of *Lysinema pungens* and *Epacris* in August (and doubtless later).

29. *H. exæca*, n.sp.

♂♀. 12-13 mm. Head and thorax white. Palpi white, tinged externally with ochreous. Abdomen whitish. Forewings elongate, posteriorly dilated, costa gently arched, apex obtuse, termen obliquely rounded; white, partially tinged with pale ochreous-yellowish; basal fifth of costa suffused with ochreous; a more or less developed outwardly oblique ochreous streak from dorsum near base, reaching half across wing; a deep ochreous narrow fascia slightly beyond middle parallel to termen, tending to be obsolete at extremities, posteriorly edged with a few black specks; an irregular narrow ochreous fascia just before termen from apex to tornus, anteriorly edged with a few black specks; between this and preceding fascia is sometimes more or less irregular pale yellow-ochreous suffusion: cilia white, partially tinged with yellow-ochreous, with a few black specks, especially at tornus. Hindwings and cilia whitish.

NEW GUINEA: Sudest I. (Meek)—Q.: Townsville, in May (Dodd); three specimens. The smallest, relatively shortest-winged, and least decorative species.

## 8. HYPERXENA Meyr.

*Hyperxena* Meyr., Proc. Linn. Soc. N. S. Wales, 1882,

177 ... .. type *scierana*.

Palpi very long, porrected, second joint with long rough obliquely projecting scales above, terminal long, rough-scaled above. Thorax with double posterior crest. Forewings with tufts of scales, 7 to costa, 8 separate. Hindwings with 3 and 4 remote, parallel, 5 nearly parallel, 6 to costa, 6 and 7 remote, nearly parallel.

The single species, of which the ♂ is still unknown, is superficially dissimilar to the rest of the family, and its structural characters are so far unspecialised as to leave its affinity somewhat uncertain; but after a very careful consideration of the two original specimens, which are all I have seen, I can see no grounds for referring them elsewhere, and think they may be a primitive type of this group.

30. *H. scierana* Meyr.

(*Hyperæna scierana* Meyr., Proc. Linn. Soc. N. S. Wales, 1882, 177.)

N.S.W.: Blackheath (3500 feet), Parramatta; in August and September. Probably overlooked by collectors through its early appearance; should be looked for at Sydney in July.

TORTRICIDÆ.

Ocelli present. Forewings with 2 from before  $\frac{3}{4}$  of cell. Hindwings without basal pecten on lower margin of cell.

This extensive family contains the majority of the Australian *Tortricina*, and the same case holds in New Zealand, whilst in other regions the *Eucosmide* are the dominant family. The forty Australian genera fall roughly into three groups, which are natural, though not capable of strict definition; viz. (a) the primitive *Peronea*-group, in which the forewings have tufts of scales on the surface, and the neuration is variable and unspecialised (genera 37-48); (b) the typical *Tortrix*-group (genera 25-36); and (c) the *Capua*-group, in which veins 7 and 8 of forewings are stalked (genera 9-24). This last group, though occurring also in other regions, is much more extensively developed in Australia than elsewhere; whilst the first group is less developed than elsewhere, and probably mainly indicative of comparatively recent Malayan immigration.

1. Head smooth-scaled.....	2.
Head not smooth-scaled.....	4.
2. Forewings with 3 from angle.....	3.
Forewings with 3 from considerably before angle...	26. CHRESMARCHA.
3. Hindwings with 3 and 4 connate, 6 and 7 stalked.	27. ZACORISCA.
Hindwings with 3 and 4 approximated, 6 and 7 approximated.....	28. ATTERIA.
4. Forewings with 7 absent (coincident with 8).....	21. ATELODORA.
Forewings with 7 present.....	5.
5. Forewings with 7 and 8 stalked.....	6.
Forewings with 7 separate... ..	22.
6. Forewings with 7 to costa .. .. .	39. DICHELOPA.
Forewings with 7 to termen... .	7.

7. Forewings with 9 out of 7.....	40. DRACHMOBOLA.
Forewings with 9 separate.....	8.
8. Forewings with 3 and 4 stalked.....	41. TYMBARCHA.
Forewings with 3 and 4 separate.....	9.
9. Hindwings with 4 absent.....	18. LAMYRODES.
Hindwings with 4 present.....	10.
10. Hindwings with 3 and 4 separate.....	11.
Hindwings with 3 and 4 connate or stalked.....	17.
11. Forewings with 3 from considerably before angle..	12.
Forewings with 3 from angle.....	13.
12. Thorax with crest.....	20. ARISTOCOSMA.
Thorax without crest.....	23. ADOXOPHYES.
13. Hindwings with 3 and 4 remote.....	14.
Hindwings with 3 and 4 nearly approximated at base.....	22. PROCALYPTIS.
14. Hindwings with 3, 4, 5 equidistant.....	15.
Hindwings with 4 nearer 5 at base than 3.....	16.
15. Palpi subascending, thoracic crest large.....	12. PYRGOTIS.
Palpi porrected, thoracic crest small or absent....	11. ISOCHORISTA.
16. Thorax with crest.....	13. ACROPOLITIS.
Thorax without crest.....	10. PARASELENA.
17. Palpi ascending.....	18.
Palpi porrected.....	19.
18. Thorax with crest.....	14. ASTHENOPTYCHA.
Thorax without crest.....	24. HOMONA.
19. Antennæ with basal third thickened with dense scales.....	15. RHOMBOCEROS.
Antennæ with basal third not thickened.....	20.
20. Palpi in ♂ with large expansible fringe of hairs above.....	16. ACROCEUTHES.
Palpi in ♂ without such fringe.....	21.
21. Palpi in ♂ cylindrical, with appressed scales except near base.....	17. AELOSTOMA.
Palpi with projecting scales above and beneath....	19. CAPUA.
22. Forewings with 8 and 9 stalked.....	23.
Forewings with 8 and 9 separate.....	24.
23. Thorax with crest.....	48. MICTONEURA.
Thorax without crest.....	44. PARASTRANGA.
24. Forewings with 7 to costa.....	46. PERONEA.
Forewings with 7 to apex or termen.....	25.
25. Forewings with 3 and 4 stalked.....	26.
Forewings with 3 and 4 separate.....	27.
26. Hindwings with 4 absent.....	45. EBODA.
Hindwings with 4 present.....	42. SPATALISTIS.



27. Hindwings with 7 from cell considerably before angle.....	43. SCOLIOPECTA.
Hindwings with 7 from angle.....	28.
28. Hindwings with cell open between 4 and 6....	37. DIACTENIS.
Hindwings with cell closed.....	29.
29. Hindwings with 3 and 4 separate.....	30.
Hindwings with 3 and 4 connate.....	34.
30. Hindwings with 3 and 4 widely remote.....	31.
Hindwings with 3 and 4 approximated at base.....	32.
31. Forewings with tufts of scales.....	47. PALÆOTOMA.
Forewings without tufts.....	9. PROSELENA.
32. Thorax with crest.....	34. HARMOLOGA.
Thorax without crest.....	33.
33. Palpi ascending.....	30. MERITASTIS.
Palpi porrected.....	31. EPICHOIRISTA.
34. Palpi ascending.....	25. CACÆCIA.
Palpi porrected.....	35.
35. Terminal joint of palpi absent.....	36. XENOTHICTIS.
Terminal joint of palpi present.....	36.
36. Hindwings with 6 and 7 stalked.....	35. CNEPHASIA.
Hindwings with 6 and 7 approximated.....	37.
37. Forewings with tufts of scales ..	38. ARGYROTOXA.
Forewings without tufts.....	38.
38. Antennæ in ♂ dentate, fasciculate-ciliated, palpi long or very long.....	32. AROTROPHORA.
Antennæ in ♂ simply ciliated, palpi moderately long.....	39.
39. Thorax with crest.....	33. EULIA.
Thorax without crest.....	29. TORTRIX.

9. PROSELENA Meyr.

*Proselela* Meyr., Proc. Linn. Soc. N. S. Wales,

1881, 421 ... .. type *amosana*.

*Prothelymna* Meyr., Trans. N. Z. Inst., 1882, 57, type, *antiquana*.

Antennæ in ♂ rather strongly ciliated. Palpi moderate, porrected, second joint dilated with rough scales above and beneath, terminal short. Thorax smooth. Forewings with 7 to termen, 8 separate. Hindwings with 3 from much before angle, remote and nearly equidistant from 2 and 4, 4 from angle, 5 rather approximated to 4 at base, transverse vein extremely oblique, 6 and 7 long-stalked.

Originally founded on a single species; I subsequently widened the generic characters so as to include some other forms which I now believe to have no immediate affinity here, and have therefore removed them to a new genus in the neighbourhood of *Tortrix*. There is now only one Australian species, which is undoubtedly closely allied to the following genus, *Paraseleena*, and must be supposed to have arisen from it by the reduction and disappearance of the stalk of veins 7 and 8 of forewings; and two New Zealand species, curious forms which are not much like the type or one another, but appear to agree in all essential structure.

31. *P. annosana* Meyr.

(*Proseleena annosana* Meyr., Proc. Linn. Soc. N.S.Wales, 1881, 421.)

N.S.W.: Parramatta—TASM.: Launceston—S. AUST.: Wirrara; from September to November.

10. PARASELEENA, n.g.

Antennæ in ♂ moderately ciliated. Palpi moderate, porrected, second joint dilated with rough scales above and beneath, terminal short. Thorax smooth. Forewings with 7 and 8 stalked, 7 to termen. Hindwings with 3 from much before angle, remote and nearly equidistant from 2 and 4, 4 from angle, 5 rather approximated to 4 at base, transverse vein very oblique, 6 and 7 long-stalked.

Type *P. thamnus* Meyr. The species are similar in general characters to the preceding, from which they differ only by the stalking of veins 7 and 8 of forewings. The genus is endemic, and must be regarded as a modification of *Isochorista*.

32. *P. tenella*, n.sp.

♀. 8 mm. Head and palpi whitish. Thorax whitish, partially tinged with pale yellow-ochreous. Abdomen pale whitish-ochreous. Forewings elongate, costa moderately arched, apex round-pointed, termen rounded, rather strongly oblique; white, thinly sprinkled with fuscous; an undefined basal patch and

moderately broad fasciæ at  $\frac{1}{2}$  and  $\frac{3}{4}$  formed by irregular yellow-ochreous suffusion: cilia whitish, with a few fuscous specks. Hindwings and cilia white.

N.S.W.: Bathurst, 2500 feet, in November; one specimen.

33. *P. thamnas*, n.sp.

♂. 12 mm. Head whitish, tinged with fuscous on crown except in middle. Palpi whitish, sprinkled with grey externally. Antennal ciliations 2. Thorax whitish-fuscous sprinkled with dark fuscous. Abdomen whitish-ochreous. Forewings elongate, costa moderately arched, apex round-pointed, termen rounded, rather strongly oblique; light fuscous mixed with whitish; some undefined spots of yellow-ochreous suffusion arranged as though indicating a basal patch and narrow transverse fasciæ at  $\frac{1}{2}$  and  $\frac{3}{4}$ : cilia grey-whitish, with a few fuscous specks. Hindwings and cilia whitish-grey.

S. AUST.: Adelaide, in October; two specimens.

11. ISOCHORISTA Meyr.

*Isochorista* Meyr., Proc. Linn. Soc. N. S. Wales,

1881, 424 ... .. type *ranulana*.

Antennæ in ♂ shortly or moderately ciliated. Palpi moderate, porrected, second joint dilated with rough scales above and beneath, terminal short. Thorax usually with slight crest. Forewings with 7 and 8 stalked, 7 to termen. Hindwings with 2 widely remote from 3, 3-5 moderately remote, equidistant and nearly parallel, transverse vein oblique, 6 and 7 long-stalked.

An endemic genus, probably derived from *Capua*, to which the species are generally similar. They are frequently small and obscure insects, but locally abundant where they occur. None are yet known in the larval stage.

34. *I. cerophanes*, n.sp.

♂. 13 mm. Head, palpi, and thorax light ochreous-yellowish. Abdomen light grey. Forewings elongate, suboblong, without costal fold, costa moderately arched towards base, thence nearly

straight to near apex, apex obtuse, termen obliquely rounded; whitish-ochreous, with a few scattered dark fuscous scales; about 10-11 little oblique rather irregular ochreous-yellow transverse striae, partially coalescing to form a basal patch and central fascia; some dark fuscous strigulation towards dorsum before and beyond central fascia; some scattered dark fuscous strigulae on costa; costal edge of central fascia suffused with dark fuscous, and two small dark fuscous spots with some grey suffusion on costa towards apex: cilia light ochreous-yellowish. Hindwings and cilia fuscous.

Q.: Eumundi; amongst subtropical scrub, in November(Turner); two specimens. Differs from all by its general ochreous-yellowish colouring.

35. *I. melanocrypta*, n.sp.

♂. 11-12 mm. Head, palpi, thorax, and abdomen bronzy-fuscous; antennal ciliations minute. Forewings elongate, without costal fold, costa moderately arched, apex obtuse, termen slightly rounded, oblique; rather light purplish-grey; markings formed of mixed ferruginous and black scales; a moderate basal patch, outer edge angulated in middle; a stria near beyond this; central fascia reduced to a costal spot not reaching half across wing, connected by a stria with dorsum; an irregular stria beyond this, costa somewhat marked with white about its origin; two or three irregular striae before termen, coalescing on posterior fourth of costa into a triangular patch: cilia whitish-ochreous, basal half spotted with dark grey. Hindwings grey; cilia whitish-grey, with grey subbasal shade. Undersurface of forewings suffused with dark purplish-fuscous except towards dorsum and termen; undersurface of hindwings with streaks of dark purple-fuscous suffusion along dorsum and anterior half of costa.

Q.: Mount Tambourine, in October(Turner); two specimens. An obscure insect, but specially characterised by the dark suffusion of undersurface, which is, however, not improbably a sexual character.

36. *I. encotodes*, n.sp.

♂♀. 14-15 mm. Head and thorax brownish mixed with dark fuscous. Palpi dark fuscous, with a few whitish scales. Antennal

ciliations in ♂ 1. Abdomen dark grey. Forewings elongate, moderate, costa gently arched, in ♂ without fold, apex obtuse, termen slightly rounded, oblique; fuscous, with a faint purplish tinge; about 9-10 coarse oblique striæ of black irroration more or less mixed with deep ferruginous; in the ♂ example there is some irregular whitish irroration between these, especially in the space between basal patch and central fascia, and towards costa beyond central fascia: cilia fuscous mixed with paler, with a blackish antemedian line. Hindwings rather dark fuscous; cilia fuscous, with a darker subbasal shade.

TASM.: Mount Wellington, 1200 feet, in December; two specimens. This and the next species are best distinguished from the other similar obscure species which follow, by the absence of costal fold in ♂.

37. *I. pumicosa*, n.sp.

♂. 12 mm. Head and thorax ashy-fuscous. Palpi dark fuscous, with some whitish scales. Antennal ciliations  $\frac{1}{3}$ . Abdomen dark grey. Forewings elongate, costa without fold, gently arched, apex obtuse, termen almost straight, oblique; ashy-fuscous; about ten coarse irregular oblique striæ of black irroration somewhat mixed with ferruginous scales, on costal edge separated by whitish scales: cilia fuscous with a dark fuscous antemedian shade, base whitish. Hindwings rather dark fuscous, darker posteriorly; cilia fuscous, with dark fuscous subbasal shade.

VIC.: Mount St. Bernard, 5000 feet, in February (Lyell); type in Coll. Lyell. Differs from *I. encotodes* by much shorter ciliations of antennæ in ♂, therefore certainly distinct; smaller and darker, with much less ferruginous admixture, and central fascia not obviously defined.

38. *I. parmiferana* Meyr.

(*Capua parmiferana* Meyr., Proc. Linn. Soc. N.S.Wales, 1881, 534.)

N.S.W.: Woodford (Lyell), Sydney; in October and March.

39. *I. ranulana* Meyr.

(*Isochorista ranulana* Meyr., Proc. Linn. Soc. N.S. Wales, 1881, 424).

Q.: Brisbane(Turner), Toowoomba—N S.W.: Glen Innes(3500 feet), Murrurundi, Bathurst, Mittagong, Sydney, Bulli—Vic.: Beaconsfield(Lyell), Healesville, Sale—S. Austr.: Mount Lofty, Wirrararra; from August to December, and in March and April. The smallest species of the genus.

40. *I. helota*, n.sp.

♂. 9-10 mm. Head, palpi, and thorax brownish, sometimes mixed with blackish, base and extreme apex of palpi whitish. Abdomen dark grey. Forewings elongate, costa gently arched, with fold reaching to near  $\frac{2}{3}$ , apex obtuse, termen slightly rounded, oblique; fuscous, with a faint purplish tinge; about 8-10 irregular broken oblique transverse striæ of blackish irroration largely suffused with bronzy-yellowish or bronzy-ochreous, on costa sometimes edged with whitish: cilia whitish-yellowish partially suffused with grey, with two blackish lines. Hindwings dark fuscous, with slight bronzy tinge; cilia grey, with darker subbasal shade.

Vic.: Healesville—TASM.: Deloraine; in November and December, ten specimens. Smaller than any other species except *I. ranulana*, which is narrower-winged and much more distinctly marked.

41. *I. paucelana* Meyr.

(*Isochorista paucelana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 425.)

N.S.W.: Blackheath (3500 feet)—Vic.: Gisborne, Mount Macedon, Beaconsfield (Lyell)—TASM.: Mount Wellington—S. Austr.: Mount Lofty, Mount Gambier(Guest); from September to December. Mr. Lyell writes "in swarms on grassy hillsides in spring."

42. *I. chaodes*, n.sp.

♂♀. 12-14 mm. Head, palpi, and thorax fuscous, sometimes with a few ochreous scales. Abdomen bronzy-fuscous. Fore-

wings elongate, posteriorly dilated, costa slightly arched, with fold reaching to beyond middle, apex obtuse, termen almost straight, oblique; fuscous, with a slight purplish tinge, with very undefined irregular oblique striæ of black irroration more or less interspersed with reddish-ferruginous and yellow-whitish scales; often a large triangular whitish dorsal blotch somewhat before middle, reaching more than half across wing, but this is sometimes indistinct or absent; sometimes more or less whitish suffusion between striæ towards tornus and termen: cilia fuscous, more or less distinctly barred with pale ochreous, with a line of black irroration. Hindwings rather dark fuscous, slightly brassy-tinged; cilia light fuscous or whitish-fuscous, with darker subbasal shade.

TASM.: Hobart—VIC.: Mount Macedon(Lyell); in December, ten specimens.

#### 43. *I. acrodesma* Low.

(*Capua acrodesma* Low., Trans. Roy. Soc. S. Austr., 1902, 234.)

♂. 12-15 mm. Antennal ciliations  $\frac{1}{2}$ . Forewings elongate, costa slightly arched, bent towards middle, fold reaching to beyond  $\frac{2}{5}$ , apex obtuse, termen straight, oblique; light ashy-grey mixed with whitish; about ten irregular oblique striæ of mixed black and ochreous scales: cilia light grey barred with whitish, with an interrupted black subbasal line. Hindwings grey; cilia grey, paler towards tips.

N.S.W.: Broken Hill(Lower)—VIC.: Wandin, Gisborne(Lyell); in September and October. Shortly redescribed from type and four other examples.

#### 44. *I. callizyga* Low.

(*Pyrgotis callizyga* Low., Trans. Roy. Soc. S. Austr. 1901, 69.)

Groundcolour of forewings varies from pale ochreous-yellowish to ochreous-white. Characterised by well-defined dark fuscous markings, extension of basal patch along dorsum, and tornal blotch connected with central fascia.

Vic.: Gisborne(Lyell)—S. Austr.: Mount Lofty, Mount Gambier(Guest); in October and November. Three specimens seen, all ♀.

45. *I. cosmota* Meyr.

(*Isochorista cosmota* Meyr., Proc. Linn. Soc. N.S. Wales, 1886, 1038; *Acropolitis heliochaes* Low., Proc. Linn. Soc. N. S. Wales, 1898, 47.)

Forewings with costal fold reaching to beyond middle; a subcostal flap of projecting scales from near base to near middle; an expansible triangular projection of scales from dorsum towards base. Hindwings beneath with a strong upcurved longitudinal ridge traversing upper part of cell, causing partial distortion of wing; 5 unusually remote from 4.

Vic.: Gisborne(Lyell)—S. Austr.: Mount Lofty(Guest), Blackwood(Lower); in November and December. Very distinct by the yellow colouring, with dark fuscous costal streak and posterior band; I give fully the peculiar sexual characters above; only three ♂ specimens seen.

12. PYRGOTIS Meyr.

*Pyrgotis* Meyr., Proc. Linn. Soc. N. S. Wales, 1881,

439 ... .. type *insignana*.

Antennæ in ♂ moderately strongly ciliated. Palpi moderate, subscending, second joint with rough projecting scales beneath and towards apex above, terminal moderate. Thorax with large double crest. Forewings with 7 and 8 stalked, 7 to termen. Hindwings with 3-5 separate, equidistant, rather approximated towards base, 6 and 7 short-stalked.

Besides the following, I now include only two New Zealand species in this genus. Prof. Fernald endeavours to make *P. plagiatana* Walk., the type, but it does not agree with the structural characters as defined.

46. *P. insignana* Meyr.

(*Pyrgotis insignana* Meyr., Proc. Linn. Soc. N.S. Wales, 1881, 440.)



Q.: Brisbane—N.S.W.: Blackheath, 3500 feet—VIC.: Gisborne (Lyell), Melbourne—TASM.: Deloraine—S. AUSTR.: Mount Gambier (Guest), Mount Lofty—W. AUSTR.: Waroona (Berthoud), Albany; from September to December, and in March.

### 13. ACROPOLITIS Meyr.

*Acropolitis* Meyr., Proc. Linn. Soc. N. S. Wales,

1881, 432 ... .. type *magnana*.

*Thrinophora* Meyr., Proc. Linn. Soc. N.S. Wales,

1881, 431 ... .. type *impletana*.

Antennæ in ♂ moderately ciliated. Palpi moderate, porrected, second joint more or less dilated with projecting scales above and beneath, terminal short. Thorax with double posterior crest. Forewings with ridges of slightly raised scales, 7 and 8 stalked, 7 to termen. Hindwings with 3 from rather before angle, more or less separate from 4, 5 closely approximated or connate with 4, 6 and 7 closely approximated at base or short-stalked.

Confined to Australia; it is not improbable that all the species are attached to various forms of *Acacia*. The genus is easy of recognition; but the species, though all of rather large size, are difficult and puzzling, and require very close attention. When writing my former paper, I was unfortunately not sufficiently alive to this difficulty, and therefore identified some of Walker's species wrongly; but I think the synonymy as now given after careful examination of his types will be found correct.

### 47. *A. dryinodes*, n.sp.

♂ 25-26 mm., ♀ 30-36 mm. Head, palpi, and thorax dark ashy-fuscous. Abdomen fuscous. Forewings suboblong, costa anteriorly moderately arched, posteriorly straight, in ♂ with fold reaching  $\frac{1}{3}$ , apex obtuse, termen almost straight, nearly vertical; dark ashy-fuscous, bases of scales more or less whitish, strewn with scattered black strigulae, sometimes with some ferruginous-brownish scales especially in disc above middle and on veins; markings obscure and undefined, formed by darker suffusion, viz., a small basal patch with outer edge angulated, an irregular very

oblique central fascia, contracted above middle, broader on lower portion and tending to coalesce with an elongate-triangular blotch extending along posterior  $\frac{2}{3}$  of costa, and a transverse patch resting on termen above tornus; sometimes a slender black longitudinal dash crossing middle of central fascia, above which in ♀ is sometimes more or less undefined ochreous-brownish suffusion: cilia grey with a blackish line. Hindwings with 6 and 7 usually approximated; fuscous, strigulated with darker, towards apex suffused with darker; cilia grey, with darker subbasal shade, sometimes becoming whitish towards dorsum.

N.S.W.: Blackheath, 3500 feet (Turner)—VIC.: Gisborne (Lyell); in March and April, fifteen specimens. Bred in plenty from spun leaves (phyllodia?) of *Acacia melanoxylon* by Mr. Lyell, who sent me a fine series, showing the constancy of the specific characters. The Blackheath specimens seen are only females, a large and fine form, but apparently not distinguishable.

48. *A. dolosana* Walk.

(*Portria dolosana* Walk., Cat. xxviii., 331; *Aeropolitis dolosana* Meyr., Proc. Linn. Soc. N.S. Wales, 1881, 435.)

♂ 20-25 mm., ♀ 24-30 mm. Forewings with costal fold in ♂ reaching somewhat beyond  $\frac{1}{3}$ , termen in ♂ almost straight, in ♀ slightly sinuate, hardly oblique, rounded beneath; leaden-grey, very obscurely strigulated with ferruginous-ochreous, with dark ashy-fuscous markings sprinkled with black. Hindwings with 6 and 7 stalked, fuscous with distinct (sometimes strong) fulvous tinge, strigulated with darker fuscous. Recognisable by the dark colouring and suffused markings.

VIC.: Gisborne (Lyell), Melbourne (Raynor)—TASM: Deloraine—S. AUST.: Mount Lofty, Balaklava (Guest); from September to December.

49. *A. excelsa*, n.sp.

♂. 24 mm. Head, palpi, and thorax grey. Abdomen pale grey. Forewings suboblong, costa anteriorly moderately arched, posteriorly nearly straight, with fold reaching to beyond  $\frac{1}{3}$ , rather

broad, apex obtuse, termen straight, vertical, rounded beneath; grey, somewhat sprinkled with ferruginous and whitish, and strewn with blackish strigulæ; markings formed by dark grey suffusion, viz., a basal patch with outer edge angulated, a central fascia moderate towards costa, dilated and more mixed with black in disc, becoming obsolete towards dorsum, a costal patch confluent with this anteriorly and gradually diminishing to apex, a transverse blotch from termen above tornus, and a spot along upper half of termen: cilia pale grey mixed with darker (imperfect). Hindwings with 6 and 7 stalked; light grey; a yellowish-white costal patch extending from  $\frac{1}{3}$  to  $\frac{3}{4}$ ; cilia whitish, round apex suffused with grey, with a grey subbasal line.

VIC.: Mount St. Bernard, 5000 feet, in February (Lyell); type in Coll. Lyell. Most like *A. signigerana*, but certainly distinct by different costal fold, and costal patch suffused into central fascia.

50. *A. malacodes*, n.sp.

♀. 28 mm. Head, palpi, and thorax white, finely sprinkled with yellowish-grey. Abdomen whitish. Forewings suboblong, costa anteriorly moderately arched, posteriorly nearly straight, apex obtuse, termen nearly straight, little oblique, rounded beneath; white, partially very faintly tinged with ochreous; markings faint, formed by a fine grey sprinkling, here and there slightly marked with yellowish; an angulated stria indicating edge of basal patch; central fascia narrow on upper half, interrupted above middle, broad and irregular on lower half; five small spots on posterior half of costa, last three included in a triangular suffused patch; a narrow patch along lower  $\frac{2}{3}$  of termen, sending a triangular projection towards middle of disc: cilia white, with an interrupted grey line. Hindwings with 6 and 7 stalked; whitish-grey; cilia white.

W. AUSR.: Albany, in December; one specimen. Distinct by the white groundcolour and faint markings.

51. *A. magnana* Walk.

(*Tortrix magnana* Walk., Cat. xxviii., 330; *Acropolitis magnana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 434.)

Forewings broader than in other species except *A. passalotana*, termen vertical, in ♂ almost straight, in ♀ slightly sinuate; costal patch connected with termen above tornus by a moderate fascia, preceded and followed by distinct white suffusion. Hindwings with 6 and 7 stalked, distinctly tinged with yellowish throughout.

N.S.W.: Sydney, Newcastle; in October.

52. *A. canana* Walk.

(*Tortrix canana* Walk., Cat. xxviii., 331; *Acropolitis canana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 433.)

Q.: Brisbane. Walker's type is a ♀; it is still unique.

53. *A. impletana* Walk.

(*Tortrix impletana* Walk., Cat. xxviii., 331; *Thrincochora impletana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 431.)

♀. 27 mm. Head, palpi, and thorax fuscous mixed with dark fuscous and whitish. Abdomen light fuscous. Forewings sub-oblong, costa anteriorly moderately arched, posteriorly straight, apex obtuse, termen somewhat rounded, little oblique; fuscous or grey mixed with whitish and a few ferruginous-brown scales, and strewn with dark fuscous or blackish strigulae; basal patch indicated, edge obtusely angulated; markings formed by darker grey suffusion, viz., a very oblique central fascia narrow on costal third and broad on lower  $\frac{2}{3}$ , marked with a black longitudinal dash in middle, a spot on middle of costa, a triangular blotch on costa posteriorly not reaching apex, a transverse blotch from termen above tornus, and a spot on termen beneath apex: cilia grey-whitish, basal half barred with dark grey and limited by a blackish line. Hindwings with 6 and 7 closely approximated towards base; light grey, posteriorly suffusedly and obscurely strigulated with darker; central third of costa suffused with whitish as far as middle of cell; cilia grey-whitish, with grey subbasal shade.

S. AUSTR.: Mount Gambier, in November—TASM.: (Walker's types). I have described above my own single example, having

previously only given an incomplete description from the original types.

54. *A. ergophora*, n.sp.

♀. 26 mm. Head, palpi, and thorax fuscous mixed with white and ferruginous. Abdomen light fuscous. Forewings suboblong, costa anteriorly moderately arched, posteriorly straight, apex obtuse, termen distinctly sinuate, vertical, rounded beneath; whitish mixed with light grey and pale reddish-fuscous, and strewn with dark reddish-fuscous strigulæ; markings formed by brownish suffusion, viz., a basal patch with outer edge angulated in middle, an oblique central fascia narrow towards costa and dilated into an irregular blotch below middle, and an elongate-triangular blotch extending along posterior half of costa, whence three strigæ proceed towards tornus: cilia pale red-brownish barred with whitish, with a subbasal blackish line. Hindwings with 6 and 7 stalked; grey, posteriorly darker-strigulated; cilia grey-whitish, with grey subbasal line.

TASM.: George's Bay, in January; one specimen. The distinct sinuation of termen of forewings is a marked characteristic.

55. *A. signigerana* Walk.

(*Tortrix signigerana* Walk., Cat. xxviii., 332.)

♂ 24-25 mm., ♀ 27-28 mm. Head, palpi, and thorax grey or brownish mixed with dark fuscous, tips of patagia whitish. Abdomen fuscous. Forewings suboblong, costa anteriorly moderately arched, posteriorly nearly straight, with fold in ♂ not reaching  $\frac{1}{3}$ , apex obtuse, termen almost straight, nearly vertical, rounded beneath; white, more or less sprinkled especially anteriorly with grey or brownish, and strewn throughout with black or dark fuscous strigulæ; basal patch partially suffused with fuscous or grey, sometimes ochreous-tinged, outer edge angulated; markings rather dark fuscous, somewhat mixed with deep ferruginous towards costa, viz., a very oblique central fascia narrow on upper half and broad on lower half but becoming less marked towards dorsum, lower half edged above by a black dash, a small spot on middle of costa connected by a striga with posterior

edge of central fascia, a triangular blotch extending along posterior  $\frac{2}{5}$  of costa, connected beneath with a transverse blotch resting on termen above tornus, and a spot extending along upper half of termen; space above middle of disc included between these dark markings in ♀ suffused with pale ochreous: cilia ochreous-whitish, indistinctly barred with grey, with a blackish subbasal line. Hindwings with 6 and 7 approximated towards base; light grey, in ♀ posteriorly obscurely darker strigulated; a whitish costal space from  $\frac{1}{4}$  to  $\frac{3}{4}$ ; cilia whitish, with light grey subbasal shade.

VIC.: Gisborne (Lyell), Beaconsfield (Drake), Melbourne (Raynor); in December, January, and April, seven specimens. This species is quite distinct from *A. rudis* Walk., with which I confused it in my former paper; it is broader-winged, with the costal fold of ♂ much shorter, and the ochreous discal suffusion is in this species characteristic of the ♀, but in *A. rudis* of the ♂.

56. *A. cerasta*, n.sp.

♂ 21-22 mm., ♀ 27 mm. Head, palpi, and thorax brownish more or less mixed with dark grey irroration, and thorax posteriorly with whitish. Abdomen light fuscous. Forewings suboblong, costa anteriorly moderately arched, posteriorly nearly straight, with fold in ♂ reaching  $\frac{1}{3}$ , apex obtuse, termen slightly rounded, little oblique; grey, more or less mixed irregularly with white, partially suffused with pale ochreous-yellowish, and strewn with blackish strigulae; markings formed by dark brown or dark fuscous suffusion, viz., a basal patch with outer edge angulated but sometimes little marked, a very oblique central fascia, narrow on costal third and broad on lower  $\frac{2}{3}$ , connected above middle with a triangular blotch on posterior  $\frac{2}{5}$  of costa, an irregular transverse blotch resting on termen above tornus, and a spot on termen beneath apex; a more or less marked black longitudinal dash crossing middle of central fascia, subcostal area above this often suffused with yellow-ochreous: cilia light brownish mixed with whitish and sometimes indistinctly barred with pale grey, with a blackish subbasal line. Hindwings with 6 and 7 short-

stalked; grey, upper part of cell and costa above it more or less suffused with yellow-whitish, apical half of wing strigulated with darker grey; cilia grey, becoming grey-whitish towards dorsum, with a dark grey subbasal line.

Q.: Toowoomba, in October (Turner); four specimens. Smaller and rather broader-winged than *A. lignigerana*, which it most resembles; the costal fold in ♂ longer, there is more tendency to yellowish colouring, and veins 6 and 7 of hindwings are stalked.

57. *A. rudis* Walk.

(*Sciaphila rudisana* Walk., Cat. xxviii., 349; *Penthina indecretana* ibid. 377; *Acropolitis signigerana* Meyr., (nec Walk.) Proc. Linn. Soc. N. S. Wales, 1881, 438.)

♂ 17-22 mm., ♀ 24-26 mm. Forewings narrower than usual in the genus, termen more rounded and more oblique; costal fold in ♂ reaching  $\frac{2}{3}$ ; black discal dash always well-marked, ♂ showing more or less ochreous suffusion above it, ♀ always without ochreous suffusion; costal triangular patch connected with post-tornal blotch into an irregular fascia; hindwings with 6 and 7 stalked.

Q.: Brisbane (Turner), Toowoomba—N.S.W.: Tenterfield (Turner), Sydney, Cooma (3000 feet)—VIC.: Gisborne (Lyell), Melbourne, Healesville—TASM.: Hobart—S. AUST.: Mount Lofty, from July to November, and in January and February.

58. *A. lignigerana* Walk.

(*Pedisca lignigerana* Walk., Cat. xxviii., 380; *Sciaphila inconcisana* ibid. 352; *Acropolitis lignigerana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 437.)

♂ 24-26 mm., ♀ 27-32 mm. Forewings with costal fold in ♂ not reaching  $\frac{1}{3}$ , termen almost straight, nearly vertical; hindwings with 6 and 7 approximated.

Q.: Duaringa (Barnard), Brisbane (Turner)—S. AUST.: Mount Lofty, Balaklava (Guest); from September to December. As the type of *S. inconcisana* is in very poor condition and was formerly thought unidentifiable, and the name *lignigerana* is now well-

known for this species, I retain the latter, their publication having been simultaneous.

59 *A. passalotana* Meyr.

(*Acropolitis passalotana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 436.)

Forewings shorter and broader than any other, termen faintly sinuate, somewhat oblique; hindwings with 3 and 4 unusually remote, almost parallel, 6 and 7 stalked.

Q.: Toowoomba, 2000 feet, in September. Still unique.

14. ASTHENOPTYCHA Meyr.

*Asthenoptycha* Meyr., Proc. Linn. Soc. N. S.

Wales, 1881, 461 ... .. type *hemicyptana*.

*Anatropia* Meyr., Proc. Linn. Soc. N.S. Wales,

1881, 463 ... .. type *craterana*.

Antennæ in ♂ ciliated. Palpi moderate, curved, ascending (especially in ♂), second joint with scales appressed above, more or less rough-scaled beneath, terminal short, erect. Thorax with well-developed crest. Forewings with 7 and 8 stalked, 7 to termen. Hindwings with 3 and 4 connate, 5 approximated to 4 at base, 6 and 7 stalked.

An endemic genus, of which the species are similar and liable to be confused.

60. *A. epiglypta*, n.sp.

(*Asthenoptycha conjunctana* Meyr., (nec Walk.) Proc. Linn. Soc. N. S. Wales, 1881, 462.)

N.S.W.: Mount Kosciusko, 5000-6000 feet—VIC.: Beaconsfield (Lyell)—TASM.: Launceston, Deloraine; from October to January.

61. *A. conjunctana* Walk.

(*Sciaphila conjunctana* Walk., Cat. xxviii., 348.)

♂. 17-20 mm. Head, palpi, and thorax brownish sprinkled with dark fuscous. Antennal ciliations  $\frac{2}{3}$ . Abdomen light greyish-ochreous mixed with grey. Forewings elongate-triangular,



costa gently arched, fold rudimentary, apex obtuse, termen slightly sinuate, somewhat oblique; fuscous-whitish, suffusedly irrorated with fuscous, more or less strigulated and striated with dark fuscous; markings dark brown mixed with blackish; a moderate basal patch, outer edge obtusely angulated in middle; central fascia broad, oblique, narrower towards costa, bifurcate on lower half, suffused with blackish in middle, posterior edge in one specimen with irregular prominence in middle; dorsal space between basal patch and central fascia more or less distinctly paler and ochreous-tinged; three small spots on costa posteriorly, first sometimes giving rise to a more or less developed striga: cilia fuscous, at tornus mixed with whitish-ochreous. Hindwings grey; cilia pale grey or whitish-grey, with darker subbasal shade.

N.S.W.: Moust Kosciusko, 4500-4700 feet—Vic.: Gisborne (Lyell), Beaconsfield(Drake)—Tasm.: Deloraine, George's Bay; in December, January, March, and April. The pale ochreous-tinged dorsal space is characteristic.

62. *A. hemicryptana* Meyr.

(*Asthenoptycha hemicryptana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 461.)

Q.: Brisbane, Rosewood, Toowoomba—N.S.W.: Glen Innes (4500 feet); from September to December.

63. *A. craterana* Meyr.

(*Anatropia craterana* Meyr., Proc. Linn. Soc. N.S.Wales, 1881, 464.)

N.S.W.: Blackheath(3500 feet), Mount Kosciusko(4700 feet); in January.

64. *A. iriodes* Low.

(*Anatropia iriodes* Low., Proc. Linn. Soc. N.S.Wales, 1898, 48.)

Vic.: Gisborne(Lyell); in November, December, and February. Distinct by the conspicuous white area; as Mr. Lower remarks, it imitates birds' droppings.

65. *A. sphaltica*, n.sp.

♀. 17 mm. Head and thorax brownish-ochreous mixed with fuscous, thoracic crest strong, dark fuscous. (Palpi broken.) Abdomen rather dark fuscous. Forewings elongate, somewhat dilated posteriorly, costa slightly arched, apex obtuse, termen slightly sinuate, somewhat oblique; fuscous-whitish; markings formed by blackish striæ irregularly mixed with deep yellow-ochreous and filled up with leaden-grey; a moderate basal patch, outer edge obtusely angulated above middle; an indistinct stria beyond this; central fascia rather broad, little oblique, on lower half subconfluent with a conical prætoral spot so as to appear dilated; a triangular apical patch, its anterior margin running from  $\frac{2}{3}$  of costa to tornus, somewhat broken up towards costa: cilia dark bronzy-fuscous, towards tornus paler-mixed. Hindwings rather dark fuscous, towards base lighter and somewhat fulvous-tinged; cilia fuscous.

N.S.W.: Sydney (Manly Beach), in February; one specimen. As the palpi are broken, the generic location is not assured, but probably correct.

## 15. RHOMBOCEROS, n.g.

Antennæ in ♂ moderately ciliated, basal third much thickened with dense projecting scales above and beneath, serrate. Palpi moderate, porrected, second joint much expanded with long dense projecting scales above and beneath, terminal concealed. Thorax with posterior crest. Forewings with 7 and 8 stalked, 7 to termen. Hindwings with 3 and 4 stalked, 5 almost parallel, 6 and 7 stalked.

Differs from *Capua* by the peculiar antennæ.

66. *R. nodicornis*, n.sp.

♂. 12 mm. Head and thorax light greyish-ochreous mixed with brownish, face dark fuscous. Palpi brownish, internally blackish. Antennæ whitish-ochreous, basal thickened portion suffused with dark fuscous. Abdomen brownish-ochreous, apical tuft very large, suffused with dark fuscous. Forewings elongate,

posteriorly dilated, costa slightly arched, with fold reaching to beyond middle, and an expansible hair-pencil from base resting on this outside (besides the usual hairs inside), apex obtuse, termen hardly sinuate, vertical, rounded beneath; pale fuscous; costal half of fold and tuft fuscous, lower half whitish-ochreous; markings dark fuscous mixed with light ochreous-yellowish and obscurely margined with whitish-ochreous; an irregular spot in disc indicating angle of basal patch; central fascia represented by a transverse spot extending from middle of disc to near dorsum, its upper extremity enlarged; a narrow somewhat sinuate fascia running from  $\frac{2}{3}$  of costa to tornus, its upper extremity furcate and enclosing a fuscous spot; a small dark fuscous spot on costa towards apex, space between this and fascia fuscous; some strigulae along upper half of termen: cilia whitish-ochreous. Hindwings along costa from base to near apex with fringe of long pale brownish hair-scales directed downwards over surface; bronzy-fuscous with a faint reddish tinge; cilia whitish-ochreous faintly tinged with reddish.

N.G.: Sariba I.(Meek); one specimen.

#### 16. ACROCEUTHES Meyr.

*Acroceuthes* Meyr., Proc Linn. Soc. N. S. Wales,

1881, 458 ... .. type *metaxanthana*.

Antennae in ♂ ciliated. Palpi moderate, porrected, second joint with projecting scales above and beneath, in ♂ above with large expansible fringe of long hair-scales, terminal short, concealed. Thorax without crest. Forewings with 7 and 8 stalked, 7 to termen. Hindwings with 3 and 4 connate, 5 approximated to 4 at base, 6 and 7 stalked.

A specialised form of *Capna*, sufficiently characteristic for distinction.

#### 67. *A. metaxanthana* Walk.

(*Cacoecia metaxanthana* Walk., Cat. xxviii., 315; *Sciaphila projectana*, ib. 352; *Carpocapsa trajectoryana*, ib. xxx., 992; *Acroceuthes metaxanthana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 458).

Q.: Brisbane—N.S.W.: Newcastle, Sydney—VIC.: Beaconsfield, Drake); from August to March.

17. *AEOLOSTOMA*, n.g.

Antennæ in ♂ ciliated. Palpi in ♂ long, cylindrical, with appressed scales, normally porrected but erectile, towards base of second joint with scales projecting above to form a small tuft, terminal joint moderate; in ♀ moderate, porrected, second joint with projecting scales above and beneath. Thorax without crest. Forewings with 7 and 8 stalked, 7 to termen. Hindwings with 3 and 4 connate, 5 approximated to 4 towards base, 6 and 7 stalked.

Also a modification of *Capua*.

68. *A. scutiferana* Meyr.

*Capua scutiferana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 456.

Q.: Goodna (Turner), Rosewood—N.S.W.: Sydney, Kangaroo Valley; in September, October, and January.

18. *LAMYRODES*, n.g.

Antennæ in ♂ minutely ciliated. Palpi moderately long, porrected, with appressed scales tapering to a point anteriorly, terminal joint concealed. Thorax without crest. Forewings with 7 and 8 stalked, 7 to termen. Hindwings with 4 absent, 5 approximated to 3 at base, 6 and 7 closely approximated towards base.

Correlated to *Capua*.

69. *L. phileris*, n.sp.

♂. 16 mm. Head, palpi, and thorax ochreous-brownish, face paler. Abdomen pale greyish-ochreous mixed with grey. Forewings elongate, rather narrow, posteriorly slightly dilated, costagently arched, without fold, apex obtuse, termen somewhat sinuate, oblique; ochreous-brownish tinged with ferruginous; costa with some dots of dark fuscous scales anteriorly and

scattered short whitish strigulæ posteriorly; a moderate oblique somewhat darker central fascia indicated on costal half only; a line of dark brown scales along termen: cilia pale ochreous-yellowish, towards base whitish. Hindwings pale fuscous, slightly yellowish-tinged; cilia ochreous-whitish.

S. Austr.: Mount Lofty (Guest); one specimen.

#### 19. CAPUA Steph.

- Capua* Steph., Ill. Brit. Ent. iv., 171 (1834) ... type *favillaceana*.  
*Epagoge* Hb., Verz. 389 (1826) ... (?) type *grotiana*.  
*Dichelia* Guen., Micr. Ind. 7 (1845) ... type *grotiana*.  
*Teratodes* Guen., Micr. Ind. 34 (1845) ... type *favillaceana*.  
*Sperchia* Walk., Char. Het. 83 (1869) ... type *intractana*.  
*Epitymbia* Meyr., Proc. Linn. Soc. N. S. Wales,  
 1881, 657 ... type *alaudana*.

Antennæ in ♂ ciliated. Palpi moderate or long, porrected, second joint with more or less projecting scales above and beneath, terminal short. Thorax usually with slight crest. Forewings with 7 and 8 stalked, 7 to termen. Hindwings with 3 and 4 connate or seldom stalked, 5 approximated to 4 at base, 6 and 7 stalked.

A considerable genus of Indo-Malayan origin, but now more largely developed in Australia than in any other region. I do not adopt the name *Epagoge*, because (1) the application of it is dubious, as I do not admit the principle of accidental fixation by Stephens' use, and (2) I hold that the name *Capua*, which has over 70 years' use in a sense undoubtedly correct, is not to be overridden by an obsolete name now revived.

#### 70. *C. alaudana* Meyr.

(*Epitymbia alaudana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 658.)

N.S.W.: Parramatta, in September. Still unique.

#### 71. *C. phellodes*, n.sp.

♀. 12 mm. Head, palpi, and thorax pale brownish-ochreous. (Abdomen broken.) Forewings elongate, hardly dilated poste-

riorly, costa gently arched, apex obtuse, termen straight, oblique; whitish-ochreous, irregularly striated with fuscous; markings fuscous tinged with yellowish; a moderate basal patch, outer edge rather curved, irregular; central fascia represented by two dorsal blotches with a pale space between them, a dark fuscous costal blotch, and a dark fuscous transverse di-cal mark between these; a moderate fascia from  $\frac{3}{4}$  of costa to termen above tornus, broadest on costa where it forms a dark fuscous blotch, and marked in disc with several blackish strigulae: cilia whitish-ochreous mixed with fuscous and dark fuscous. Hindwings rather dark grey; cilia grey, with darker subbasal shade.

N.S.W.: Gosford, in November(Lyell); one specimen. Type in Coll. Lyell.

72. *C. periopa*, n.sp.

♀. 20-22 mm. Head, palpi, thorax, and abdomen dark fuscous. Forewings elongate, costa anteriorly moderately arched, posteriorly nearly straight, apex obtuse, termen slightly rounded, oblique; brownish, somewhat mixed with leaden-grey and ferruginous; markings dark brown mixed with ferruginous and dark grey, and strigulated with black; a moderate basal patch, outer edge angulated in middle but partially confluent beneath with an irregular spot on dorsum beyond it; a moderately broad central fascia not reaching dorsum; an irregular longitudinal black streak rising from this in middle of disc and more or less extended towards termen, posterior portion sinuate downwards; a subtriangular costal patch extending from middle to  $\frac{3}{4}$ ; a small spot on costa beyond this; an irregular undefined streak along termen: cilia brownish mixed with dark fuscous and blackish. Hindwings with 3 and 4 stalked; orange; a terminal fascia of dark fuscous suffusion, broadest at apex; dorsum suffused with fuscous; cilia fuscous, with dark fuscous subbasal shade.

N.S.W.: Narrabeen(Lyell), Parramatta(Raynor)—Vic.: Gisborne(Lyell), Lilydale; from September to November and in April, four specimens.

73. *C. cosmopis* Low.

(*Dichelia cosmopis* Low., Trans. Roy. Soc. S. Austr. 1894, 87.)

♂♀. 14-17 mm. Antennæ in ♂ strongly ciliated. Forewings in ♂ with costal fold; variable in development of white marking between basal patch and central fascia, sometimes obsolete in ♀. Hindwings variable in extent of dark fuscous terminal suffusion.

N.S.W.: Sydney—Vic.: Gisborne(Lyell), Sale(Miss M. Wise), Melbourne—S. Austr.: Mount Gambier(Guest); in March and April.

74. *C. plathanana* Meyr.

(*Capna plathanana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 457.)

♂♀. Sexes similar.

N.S.W.: Sydney; in October, December, and February.

75. *C. diemeniana* Zell.

(*Conchylis diemeniana* Zell., Hor. Ross. xiii., 138.)

♂♀. 11-13 mm. Antennal ciliations of ♂ minute. Forewings in ♂ without costal fold; basal  $\frac{2}{5}$  ochreous-yellow, rest dark fuscous. Hindwings with basal  $\frac{2}{5}$  yellowish, rest fuscous. Very distinct on this brief diagnosis.

Q.: Brisbane(Turner)—N.S.W.: Sydney(Lyell)—Vic.: Healesville(Lucas)—Tasm.: without locality(Zeller); in October and April, apparently not common.

76. *C. pentacosma* Low.

(*Anatropia pentacosma* Low., Proc. Linn. Soc. N. S. Wales, 1900, 409)

Vic.: Castlemaine(Drake), Healesville(Lucas)—S. Austr.: Blackwood(Lower); in March. Handsome and distinct; Lower's description is correct, though not very clear.

77. *C. pentazona* Low.

(*Capna pentazona* Low., Trans. Roy. Soc. S. Austr. 1901, 75.)

♂. 15-16 mm. Head, palpi, and thorax dark fuscous. Antennal

ciliations 1. Abdomen dark grey. Forewings elongate, costagently arched, without fold, apex round-pointed, termen slightly sinuate, oblique; glossy fuscous; about seven or eight irregular rather oblique dark fuscous striae strewn with whitish-yellowish brassy-tinged linear scales, and two or three additional strigae towards costa: cilia fuscous. Hindwings rather dark fuscous; cilia grey, with darker subbasal shade. Undersurface of hindwings suffused with whitish.

♀. Palpi whitish beneath. Thorax partially suffused with yellow-whitish. Forewings with striae stronger and blacker, more largely mixed and suffused with yellow-whitish; ground-colour paler, towards costa suffused with white, but with basal patch, central fascia, and a transverse semioval costal patch darker fuscous.

TASM.: Hobart (Norman), Zeehan (Findlay), Deloraine; in October and November, three specimens, viz, Lower's original female type, and two males, which notwithstanding the apparent dissimilarity, owing to the absence of white suffusion, I think are probably referable here.

78. *C. parastactis*, n.sp.

♂. 12-14 mm. Head and palpi grey. Antennal ciliations minute. Thorax whitish-ochreous, more or less mixed with pale grey except on patagia, tips of patagia whitish. Abdomen grey. Forewings elongate, costa moderately arched, without fold, apex round-pointed, termen sinuate, oblique; rather light glossy grey; about seven or eight irregular much broken oblique transverse blackish-fuscous lines suffusedly edged with pale ochreous-yellowish, one from  $\frac{2}{3}$  of costa to tornus forming a thicker entire streak: cilia light glossy grey, tips whitish. Hindwings grey; cilia whitish-grey, with grey basal line.

♀. Forewings with groundcolour largely suffused with white, except on a moderate central fascia, and triangular costal patch confluent with the dark postmedian streak.

TASM.: Deloraine; in November and December, eight specimens. Nearly allied to *C. pentazona*, but differs structurally by the minute antennal ciliations of ♂.



79. *C. isographa*, n.sp.

♂. 13-14 mm. Head, palpi, thorax, and abdomen bronzy-grey. Antennal ciliations  $\frac{2}{3}$ . Forewings elongate, posteriorly hardly dilated, costa slightly arched, without fold, apex obtuse, termen almost straight, oblique; pale grey, irregularly striated with dark fuscous; markings suffused with darker grey or fuscous; a moderate basal patch, outer edge straight, rather oblique; space between this and central fascia sometimes whitish-tinged; central fascia moderate, dilated towards dorsum, posterior edge irregular, with strong triangular incision above middle; an undefined patch occupying whole apical area, and including four small dark fuscous costal spots: cilia pale greyish, basal half sprinkled with dark fuscous. Hindwings grey, obscurely darker-strigulated; cilia light grey, with darker subbasal shade.

VIC.: Gisborne(Lyell); in March, two specimens. Type in Coll. Lyell.

80. *C. cnaphalides*, n.sp.

♂. 13 mm. Head and thorax whitish, crest mixed with blackish. Palpi whitish, second joint externally irrorated with blackish. Antennæ subdentate, ciliations  $\frac{1}{2}$ . (Abdomen broken.) Forewings elongate, posteriorly considerably dilated, costa slightly arched, bent about middle, with fold reaching to middle, apex obtuse, termen straight, rather oblique; pale whitish-fuscous mixed with pale brown-reddish, with about ten irregular oblique striæ of fuscous irroration mixed with black; an oblique patch from dorsum towards base, a very undefined central fascia, and triangular costal patch slightly indicated by fuscous suffusion: cilia whitish, with fuscous shade mixed with black. Hindwings whitish, suffusedly and coarsely strigulated with grey; cilia whitish, with grey subbasal shade.

VIC.: Lorne(Lyell); in February, one specimen. Type in Coll. Lyell.

81. *C. nummulata*, n.sp.

♂. 10-11 mm. Head and thorax whitish-ochreous, shoulders more or less bronzy-ochreous, thoracic crest mixed with blackish.

Palpi bronzy-ochreous sprinkled with fuscous. Antennal ciliations 1. Abdomen light greyish-ochreous. Forewings elongate, posteriorly slightly dilated, costa slightly arched, with fold reaching beyond  $\frac{1}{3}$ , apex obtuse, termen slightly rounded, rather strongly oblique; pale yellow-ochreous, with about twenty small bright leaden-metallic spots arranged in about five irregular transverse series, last partly terminal; markings very indefinite, ferruginous sprinkled with blackish; a streak along costal fold; an oblique patch from dorsum near base, reaching  $\frac{2}{3}$  across wing; a moderate very oblique central fascia, strongly marked towards costa but nearly obsolete dorsally, a triangular costal patch, space between this and central fascia whitish-tinged; a streak along termen: cilia pale ochreous-yellowish, with bronzy-ochreous subbasal shade. Hindwings with 3 and 4 stalked; grey-whitish, thinly scaled, veins suffused with grey; cilia grey-whitish, with grey subbasal line.

Q.: Toowoomba(Turner); in September, two specimens.

82. *C. pseudarcha*, n.sp.

♂♀. 13-14 mm. Head and thorax ochreous-whitish, in ♂ more or less suffused with yellow-ochreous. Palpi with long rough scales, ochreous-whitish, second joint centrally suffused with ochreous. Antennal ciliations in ♂  $\frac{1}{2}$ . Abdomen ochreous-whitish, in ♀ with dense anal tuft. Forewings elongate, somewhat dilated posteriorly, costa gently arched, in ♂ without fold, apex obtuse, termen almost straight, oblique; ochreous-whitish, sometimes more or less suffused with pale ochreous-yellowish, sometimes suffusedly strigulated with yellow-ochreous between the markings; markings yellow-ochreous, variable in depth and development, partially slightly sprinkled with blackish specks on margins; some indications of strigulae of blackish irroration along costa; basal patch more or less indicated, outer edge angulated in middle, slightly blackish-marked on angle; central fascia moderate, very oblique, posterior edge nearly straight, irregular, more or less well-marked, anterior edge suffused on lower half; a more or less defined subtriangular patch on costa about  $\frac{3}{4}$ ; a

streak along termen: cilia whitish-ochreous, with traces of a fuscous line, at tornus with a few blackish scales. Hindwings grey-whitish, strigulated with pale grey; cilia grey-whitish.

W. Aust.: Perth, Albany; from October to December, four specimens. Exceedingly similar to *C. decolorana*, yet certainly distinct by the absence of costal fold in male.

83. *C. decolorana* Walk.

(*Grapholita decolorana* Walk., Cat. xxviii., 392; *Capua decolorana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 447.)

N.S.W.: Sydney, Bulli Pass, Blackheath (3500 feet)—VIC.: Healesville; from September to November, and in February. Other recorded localities are based on confusion with allied species. From the following species it may be distinguished by the whitish hindwings; it is a common Sydney insect, and appears to be constant.

84. *C. euphona*, n.sp.

♂♀. 13-15 mm. Head and thorax whitish-ochreous, shoulders more or less suffused with yellow-ochreous. Palpi yellow-ochreous, above and beneath white. Antennal ciliations of ♂  $\frac{1}{2}$ . Abdomen light grey, in ♀ with dense anal tuft. Forewings elongate, posteriorly dilated, costa gently arched, in ♂ with fold reaching beyond  $\frac{1}{3}$ , apex obtuse, termen almost straight, oblique; white, basal half more or less suffused with pale ochreous-yellowish; markings deep ochreous; some costal strigulae sprinkled with blackish; an irregular spot in disc indicating angle of basal patch, edged with black scales externally; a moderate very oblique central fascia, undefined anteriorly, especially towards dorsum, posteriorly edged with black scales in disc; a rounded-quadrilateral costal patch at  $\frac{3}{4}$ , more or less edged or sprinkled with dark fuscous, and containing a small whitish costal spot; a light ochreous-yellowish streak along termen, sometimes slightly sprinkled with dark fuscous: cilia whitish-yellowish. Hindwings grey, faintly darker-strigulated; cilia light grey, with darker basal shade.

Q.: Brisbane, Stanthorpe(Turner)—N.S.W.: Bathurst—VIC.: Gisborne, Macedon, Beaconsfield (Lyell)—TASM.: Launceston, Deloraine, Hobart; from October to March, twenty specimens.

85. *C. acritodes*, n.sp.

♂♀. 12-16 mm. Head and thorax whitish-ochreous, sometimes faintly greyish-tinged. Palpi pale ochreous mixed with grey, above and beneath whitish. Antennal ciliations in ♂  $\frac{1}{2}$ . Abdomen light grey, in ♀ with dense anal tuft. Forewings elongate, posteriorly slightly dilated, costa gently arched, in ♂ with fold reaching  $\frac{1}{4}$ , apex obtuse, termen almost straight, oblique; grey-whitish sometimes tinged with yellowish, more or less indistinctly strigulated throughout with grey; markings grey, sometimes tinged with yellowish, more or less sprinkled with dark fuscous or blackish; an irregular spot in disc indicating angle of basal patch; a moderate oblique central fascia, anterior edge ill-defined, posterior well-marked; a very indefinite rounded-quadrilateral costal patch at  $\frac{3}{4}$ ; traces of a streak along termen: cilia ochreous-whitish with two grey shades. Hindwings light grey, faintly darker-strigulated; cilia whitish-grey, with darker basal shade.

VIC.: Casterton—S. AUST.: Adelaide, Wirrabara, Port Lincoln; in October and November, ten specimens. Nearly allied to the preceding, but with greyer markings, and structurally distinct by the obviously shorter costal fold of male.

86. *C. ammochroa* Low.

(*Capua ammochroa* Low., Trans. Roy. Soc. S. Aust., 1893, 167.)

S. AUST.: Glen Osmond, Blackwood(Lower); in September and October. This and the following species are the only two of which I have not seen types; I am unable to identify them, but they appear to belong here.

87. *C. leucospila* Low.

(*Capua leucospila* Low., Trans. Roy. Soc. S. Aust., 1893, 167.)

S. AUST.: Glen Osmond, Golden Grove(Lower); in September and October. Unknown to me; appears to be a distinct species, allied to the following.

88. *C. phryctora*, n.sp.

♂♀. 11-14 mm. Head and thorax brownish-ochreous sometimes mixed with fuscous. Palpi rather long, brownish-ochreous, white towards base beneath. Antennæ in ♂ dentate, ciliations 2. Abdomen grey. Forewings elongate, posteriorly somewhat dilated, costa slightly arched, with fold reaching  $\frac{1}{3}$ , apex obtuse, termen faintly sinuate, oblique; brownish-ochreous or brownish, sometimes largely suffused with white; markings darker ferruginous-brown sprinkled with black; an oblique transverse blotch from dorsum towards base, reaching  $\frac{2}{3}$  across wing; central fascia moderately broad, oblique, usually less marked and partially obsolete on lower half, upper half terminated by a black spot below middle of disc; a rounded-transverse costal patch about  $\frac{3}{4}$ , reaching  $\frac{2}{5}$  across wing, costal space between this and central fascia forming a more or less defined white triangle; a suffused streak along termen: cilia brown mixed with dark grey, outer half between apex and tornus pale ochreous-yellowish beyond a dark fuscous line. Hindwings dark fuscous; cilia light grey or whitish, with dark fuscous subbasal shade.

W. AUST.: Albany; in September and October, seven specimens. Nearly allied to *C. deuterastis*, but differently and more deeply coloured, and distinguished by black discal spot below upper half of central fascia.

89. *C. deuterastis*, n.sp.

♂. 13-14 mm. Head and thorax ochreous, partially whitish-tinged. Palpi rather long, ochreous, beneath white. Antennæ dentate, ciliations 2. Abdomen grey. Forewings elongate, posteriorly somewhat dilated, costa slightly arched, with fold reaching  $\frac{1}{3}$ , apex obtuse, termen nearly straight, oblique; whitish-ochreous, suffusedly strigulated throughout with brownish-ochreous, sometimes finely sprinkled with dark fuscous; markings ochreous-grey; an oblique patch from dorsum near base, reaching  $\frac{2}{3}$  across wing; a moderately broad central fascia, becoming obsolete on lower half; a semioval costal patch containing a whitish

costal dot, space between this and central fascia whitish-mixed or in one specimen forming a clear white costal triangle; a suffused streak along termen: cilia grey mixed with brownish-ochreous, outer half pale ochreous-yellowish between apex and tornus beyond a dark fuscous line. Hindwings grey; cilia whitish, with grey subbasal shade.

W. AUST.: Perth; in October, four specimens.

90. *C. dryina*, n.sp.

♂♀. 12-15 mm. Head, palpi, and thorax whitish-ochreous or pale brownish-ochreous. Antennæ in ♂ dentate, ciliations 1. Abdomen grey. Forewings elongate, more so in ♀, in ♂ somewhat dilated posteriorly, costa gently arched, in ♂ with fold reaching  $\frac{2}{5}$ , apex obtuse, termen almost straight, oblique, more so in ♀; light brownish ochreous, sometimes slightly reddish-tinged, often more or less strigulated with grey; dorsal edge dotted with blackish scales; markings varying from fuscous to ferruginous-brown, sometimes more or less mixed with black in disc, in ♀ indistinct or often wholly obsolete; some irregular marking in disc indicating angle of basal patch; central fascia moderate, very oblique, obsolete on dorsal half; a large triangular costal patch extending from middle of costa to near apex: cilia whitish-yellowish with two more or less indistinct grey shades, apical third clear. Hindwings grey-whitish distinctly strigulated with grey; cilia whitish, with pale grey subbasal shade.

TASM.: Deloraine—W. AUST.: Waroona (Berthoud), Albany; from September to November, twelve specimens.

91. *C. tarachota*, n.sp.

♂♀. 12-14 mm. Head and thorax ochreous, variable in tint, thorax sometimes sprinkled with brown. Palpi ochreous, sometimes mixed or partly suffused with fuscous. Antennæ in ♂ dentate, ciliations 1. Abdomen light grey. Forewings elongate, posteriorly dilated, costa gently arched, in ♂ with fold reaching to middle, apex obtuse, termen straight, oblique; light brownish-ochreous or red-brownish; markings ferruginous, more or less

mixed with fuscous and dark fuscous and sprinkled with blackish; a basal patch more or less marked, with outer edge angulated in middle; a moderate oblique central fascia, rather dilated downwards; a triangular costal patch extending from beyond middle to near apex, on costa marked with dark and pale spots; a variable transverse spot or streak resting on termen above tornus; some blackish scales along termen: cilia whitish-ochreous, with a subbasal interrupted shade of ferruginous and dark fuscous scales. Hindwings light grey, faintly strigulated with darker; cilia whitish, with grey subbasal shade.

W. AUSTR.: Perth, Albany; from September to December, seven specimens.

92. *C. ephedra*, n.sp.

♀. 16 mm. Head and thorax ochreous-whitish. Palpi fuscous, margins mixed with whitish. (Abdomen broken.) Forewings elongate, hardly dilated posteriorly, costa gently arched, apex obtuse, termen faintly sinuate, oblique; ochreous-whitish; some scattered blackish dots on costa and dorsum, accompanied by slight brown suffusion; markings rather dark fuscous, mixed with ferruginous and on costal half with blackish; a moderate rather oblique central fascia; a triangular costal patch extending from beyond middle to near apex, space between it and central fascia fuscous mixed with ferruginous; some scattered ferruginous and fuscous scales on terminal area: cilia whitish-ochreous. Hindwings whitish, suffusedly spotted throughout with light grey; cilia whitish, with grey basal line.

TASM.: Mount Wellington, 1500 feet; at the beginning of February, one specimen. Allied to *C. dryina*, but not a variety of it, the central fascia being differently placed, less oblique and broader, entire.

93. *C. hemicosmana* Meyr.

(*Capua hemicosmana* Meyr., Proc. Linn. Soc. N.S. Wales, 1881, 449.)

VIC.: Macedon(Lyell), Wandin(Jarvis), Warragul; from October to December.

94. *C. oxygona* Low.

(*Capua oxygona* Low., Proc. Linn. Soc. N. S. Wales, 1899, 92.)

N.S.W.: Broken Hill(Lower); in October. Much like *C. vacuana*, but with palpi longer, head not dark, forewings obviously longer and narrower, hindwings whitish. Subsequently Mr. Lower, by an oversight, described a different species also as *Capua oxygona* (Trans. Roy. Soc. S. Aust. 1908, 115.)

95. *C. vacuana* Walk.

(*Conchylis vacuana* Walk., Cat. xxviii., 367; *Grapholita mutata* ib. 393; *Capua vacuana* Meyr., Proc. Linn. Soc. N.S. Wales, 1881, 448.)

Q.: Duaringa(Barnard), Toowoomba, Brisbane—N.S.W.: Sydney, Bulli—VIC.: Melbourne—TASM.: Launceston; from August to April.

96. *C. fusciceps* Walk.

(*Conchylis fuscicepsana* Walk., Cat. xxviii., 364; *C. cepsana* ib. 366; *C. mundulana* ib. 368; (?) *C. albidana* ib. xxx., 987; *Dichelia fusciceps* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 473 )

Q.: Brisbane, Toowoomba—N.S.W.: Narrabeen, Ourimbah, Lilyvale(Lyell), Sydney, Bulli; from September to May.

97. *C. clarana* Walk.

(*Dichelia clarana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 475.)

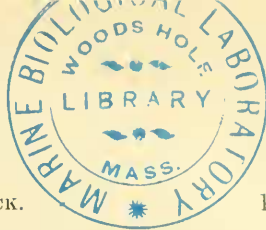
N.S.W.: Sydney, Blackheath (3500 feet)—VIC.: Gisborne, Beaconsfield, Lorne(Lyell), Melbourne—TASM.: Deloraine, Campbelltown, George's Bay, Hobart—S. AUST.: Mount Gambier (Guest); from December to March.

98. *C. solana* Walk.

(*Teras solana* Walk., Cat. xxviii., 300; *Dichelia solana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 476.)

Q.: Brisbane—N.S.W.: Sydney, Bulli—VIC.: Wandin(Jarvis), Melbourne; from August to December, and in April.



99. *C. thermaterrima* Low.

(*Dichelia thermaterrima* (err. ac prav.) Low., Trans. Roy. Soc. S. Aust., 1893, 168.)

♂♀. 12-15 mm. Head and thorax brownish-ochreous, sometimes suffused with fuscous. Palpi brownish-ochreous more or less mixed with dark fuscous. Antennal ciliations of ♂ 1. Abdomen grey. Forewings elongate, rather narrow, not dilated posteriorly, costa gently arched, in ♂ without fold, apex obtuse, termen slightly rounded, oblique; brownish-ochreous mixed with light brown-reddish, in one ♀ suffused with fuscous, more deeply and irrorated with dark fuscous posteriorly; basal patch more or less marked with dark fuscous, outer edge obtusely angulated above middle; central fascia moderate, oblique, dark fuscous edged with blackish, towards dorsum broader, less marked or nearly obsolete, more or less mixed with brown-reddish, posterior edge semicircularly excavated above a longitudinal more or less developed blackish mark in middle; costal patch flattened-triangular, dark fuscous marked with blackish, with three small dark spots on costa; some dark fuscous strigulae towards termen: cilia pale brownish-ochreous, on basal half more or less barred with grey and blackish, in the dark ♀ basal half suffused with fuscous and dark fuscous. Hindwings grey, darker posteriorly; cilia light grey, with darker subbasal shade.

Vic.: Gisborne, Lorne(Lyell)—S. AUST.: Mount Lofty(Lower); in March and April. Lower quotes Tasmania as a locality on my authority, but this was based upon a supposed identification of mine which I now think mistaken. I have redescribed the species from three specimens (one male, two females) received from Lower and Lyell; it is an obscure insect, but seems to be a good species. The orthography of the name adopted is that intended by the author.

100. *C. hyperetana* Meyr.

(*Dichelia hyperetana* Meyr., Proc. Linn. Soc. N.S. Wales, 1881, 479; *Palwobia crepusculana* ib. 668; *Dichelia diptheroides* Low, Trans. Roy. Soc. S. Aust. 1902, 252.)

VIC.: Warragul(Raynor), Macedon(Lyell), Birchip(Goudie), Healesville—TASM.: Launceston, Deloraine, Hobart; in November and December. Both sexes taken abundantly in Tasmania; varies in development of markings, but always distinct from the preceding.

101. *C. montivagana* Meyr.

(*Dichelia montivagana* Meyr., Proc. Linn. Soc. N.S.Wales, 1881, 477.)

N.S.W.: Sydney, Blackheath (3500 feet), Nowra—VIC: Gisborne(Lyell), Melbourne—TASM.: Deloraine, George's Bay—S. AUST.: Mount Lofty; from November to March.

102. *C. argillosana* Meyr.

(*Dichelia argillosana* Meyr., Proc. Linn. Soc. N.S.Wales, 1881, 479.)

VIC.: Melbourne (Raynor). This distinct species is still unique.

103. *C. atristrigana* Meyr.

(*Dichelia atristrigana* Meyr., Proc. Linn. Soc. N.S.Wales, 1881, 478; *D. lunifera* Low., Trans. Roy. Soc. S. Aust, 1908, 321.)

N.S.W.: Broken Hill(Lower), Lilyvale, Como(Lyell), Parramatta; in March and April.

104. *C. intractana* Walk.

(*Sperchia intractana* Walk., Char. Het. 82; *Capua sordidatana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 454; *C. obscuratana* ib. 455.)

Q.: Daringa(Barnard), Brisbane, Toowoomba—N.S.W.: Sydney, Wollongong, Kiama—VIC.: Melbourne(Raynor), Gisborne(Lyell)—TASM.: Deloraine—S. AUST.: Adelaide(Guest); all the year except May.

105. *C. mersana* Walk.

(*Terus mersana* Walk., Cat. xxviii., 298; *Capua chimerinana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 452.)

N.S.W.: Moruya(Murray), Sydney—VIC.: Kewell(Hill), Wandin(Jarvis), Gisborne, Beaconsfield, Lorne(Lyell), Melbourne—

TASM.: Launceston (Lyell), Hobart (Lea), Deloraine, George's Bay—S. AUST.: Mount Gambier, Mount Lofty (Guest)—W. AUST.: Bridgetown (Bracken), Waroona (Berthoud), Albany, from September to June.

106. *C. montanana* Meyr.

(*Capua montanana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 451.)

♀. 13 mm. Smaller than ♂ type, but otherwise similar.

N.S.W.: Blackheath, Mount Victoria (3500 feet); in November and March.

107. *C. placodes* Low.

(*Capua placodes* Low., Proc. Linn. Soc. N. S. Wales, 1899, 93.)

♂. 20-21 mm. Head whitish-ochreous or greyish-ochreous, tips of scales whitish. Palpi fuscous, more or less suffused above with ochreous-whitish. Antennæ dentate, ciliations 1. Thorax reddish-ochreous-brown mixed with whitish. Abdomen pale whitish-ochreous, sometimes sprinkled with grey. Forewings elongate, rather narrow, posteriorly dilated, costa slightly arched, with fold almost reaching middle, apex obtuse, termen slightly rounded, oblique; pale ochreous, more or less tinged with light red-brownish, sometimes partially sprinkled with grey; markings ochreous-brown sometimes mixed with grey; costal fold strigulated with blackish; basal patch sometimes marked with black, narrowest on dorsum, outer edge rather acutely angulated in middle; a semioval spot on middle of dorsum; central fascia moderate, oblique, with a strong angular prominence in middle of posterior edge, marked with a longitudinal median black dash which extends into this prominence and is there edged above with white; costal blotch formed by three small costal spots connected with an irregular longitudinal spot beneath them; an elongate spot extending along lower  $\frac{2}{3}$  of termen: cilia whitish-ochreous, more or less barred on basal half with dark fuscous, on costa whitish barred with dark fuscous. Hindwings grey or light grey, obscurely darker-strigulated posteriorly; cilia whitish, with grey subbasal shade.

N.S.W.: Broken Hill(Lower); from September to December. Lower's description is not satisfactory; I have therefore re-described the species from the original type and a second fine specimen received from Mr. Lower. The species is allied to *C. montanana*, but distinct.

108. *C. leptospila* Low.

(*Cupna leptospila* Low., Trans. Roy. Soc. S. Aust. 1901, 74.)

♂. 19 mm. Head white. Forewings with costal fold reaching middle; fuscous much mixed with white, with coarse scattered dark fuscous strigulae; basal patch undefined; central fascia moderate, oblique, indicated by absence of white mixture, marked with a dark fuscous spot in middle; four small rather dark fuscous spots on costa posteriorly, and an elongate transverse spot before lower portion of termen: cilia whitish, barred on basal half and on costa with rather dark fuscous. Hindwings pale whitish-grey, faintly darker-strigulated; cilia white, with interrupted greyish subbasal shade.

N.S.W.: Broken Hill(Lower); in May. I have thought it necessary to redescribe this also from the type; it is allied to the preceding.

109. *C. notograptus*, n.sp.

♀. 18-19 mm. Head, palpi, and thorax fuscous irrorated with whitish-ochreous, thorax mixed with ferruginous. Abdomen ochreous-whitish mixed with grey. Forewings elongate, somewhat dilated posteriorly, costa slightly arched, apex obtuse, termen straight, oblique; pale whitish-ochreous, more or less sprinkled with whitish; markings dark grey, more or less mixed with ferruginous-brown and edged with black; a narrow oblique fascia from dorsum towards base, nearly reaching costa; an elongate spot extending nearly over central third of dorsum; central fascia moderate, very oblique, posterior edge deeply emarginate above middle; costal patch semioval, marked on costa with three small dark spots separated by spots of groundcolour; a small spot on costa before apex; a thick streak close before termen on lower  $\frac{2}{3}$ , sometimes connected beneath with central

fascia: cilia whitish-ochreous, round apex tinged with reddish-ochreous, with dark fuscous bars above and below apex. Hindwings whitish, coarsely strigulated and spotted with grey; cilia grey-whitish.

Vic.: Birchip(Goudie); in April, two specimens. Type in Coll. Lyell.

110. *C. ceramica* Low.

(*Capua ceramica* Low., Trans. Roy. Soc. S. Aust. 1908, 115.)

♂. 19-20 mm. Palpi unusually long. Forewings with costal fold rather broad, reaching  $\frac{1}{3}$ ; characterised by obsolescence of basal patch and central fascia. Hindwings whitish-grey, spotted and strigulated with grey.

Vic.: Monbulk(Lower), Beaconsfield(Lyell), Wandiu(Jarvis); in August and September.

111. *C. debiliana* Walk.

(*Sciaphila debiliana* Walk., Cat. xxviii., 351; *S. sidneyana* ib. 352; *Capua melancrocana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 450.)

N.S.W.: Sydney—Vic.: Gisborne(Lyell), Castlemaine(Drake)—S. Aust.: Mount Lofty (Guest)—W. Aust.: Waroona (Berthoud), York; from August to October.

112. *C. scotinopa* Low.

(*Dichelia scotinopa* Low., Trans. Roy. Soc. S. Aust. 1902, 235.)

♂♀. 18 mm. Antennal ciliations in ♂ minute. Forewings in ♂ without costal fold. A distinct species, sufficiently characterised by Lower.\*

Vic.: Stawell(Lower), Gisborne(Lyell); in March and April.

113. *C. ophthalmias*, n.sp.

♂♀. 21-23 mm. Head and palpi in ♂ grey, in ♀ brownish-ochreous mixed with dark red-brown. Antennæ in ♂ dentate, ciliations 1. Thorax in ♂ reddish-brown, in ♀ dark purplish-fuscous mixed on shoulders with dark red-brown. Abdomen

grey. Forewings elongate, in ♂ posteriorly dilated, in ♀ suboblong, costa gently arched, in ♂ with fold reaching to near middle, apex obtuse, termen in ♂ hardly sinuate, rather oblique, in ♀ sinuate, little oblique; in ♂ reddish-brown, in ♀ rather dark purple-grey, obscurely strigulated with dark red-brown; costa more or less strigulated with blackish; basal patch in ♂ somewhat darker, outer edge indicated in disc by a transverse streak of blackish scales; a patch of pale suffusion above middle of disc, sometimes whitish-mixed, edged beneath by a thick black down-curved streak extending more than  $\frac{1}{3}$  of length of wing, anterior extremity in ♂ connected with costa by a fuscous spot and posterior by a triangular fuscous costal patch which is trifurcate on costa: cilia reddish-brown, in ♀ mixed with dark purple-fuscous. Hindwings in ♂ whitish-grey spotted with grey, in ♀ grey strigulated with darker; cilia pale grey, with darker sub-basal shade.

N.S.W.: Hazelbrook(Lyell)—VIC.: Melbourne(Kershaw); in April, three specimens.

114. *C. isoscelana* Meyr.

(*Dichelia isoscelana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 470.)

N.S.W.: Blackheath (3500 feet), Bulli Pass—VIC.: Gisborne, Beaconsfield(Lyell), Wandin(Jarvis), Melbourne—TASM.: Zeehan (Findlay)—S. AUST.: Mount Lofty; in October and November.

115. *C. disputana* Walk.

(*Sciaphila disputana* Walk., Cat. xxviii., 349; *Dichelia disputana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 472.)

N.S.W.: Sydney; in February, March, and from June to September.

116. *C. paraloxa*, n.sp.

♂. 14-16 mm. Head, palpi, and thorax brownish-ochreous, scales of palpi rather appressed beneath. Antennal ciliations minute. Abdomen ochreous-whitish, sometimes tinged with grey. Forewings elongate, suboblong, costa moderately arched,

without fold, apex obtuse, termen faintly sinuate, rather oblique; pale brownish-ochreous, more or less tinged with light brown-reddish; markings rather dark brown; a basal patch more or less partially indicated, outer edge straight, oblique; central fascia moderate, very oblique, anterior edge straight, well-marked, posterior very indefinite, broadest and most distinct towards dorsum, narrower on dorsum itself; a straight well-marked streak from  $\frac{2}{3}$  of costa to termen above tornus, beyond which is some slight dark suffusion and scattered dark fuscous strigulae: cilia whitish-ochreous, basal half more brownish-ochreous, becoming darker and greyish towards apex. Hindwings grey-whitish, towards apex slightly ochreous-tinged, with some faint grey strigulae; cilia grey-whitish, with faint grey subbasal shade.

N.S.W.: Lawson(Lyell)—VIC.: Beaconsfield (Lyell); in November, March, and April, three specimens.

117. *C. placoxantha* Low.

(*Anisogona placoxantha* Low., Trans. Roy. Soc. S. Aust. 1896, 160.)

♂♀. 13-16 mm. Antennal ciliations of ♂ 1. Forewings in ♂ without fold. A very distinct species, recognisably described by Lower, but the pale costal spot between central fascia and costal patch is usually white more or less tinged with ochreous towards costa, not yellow.

VIC.: Gisborne, Beaconsfield, Macedon, Lorne(Lyell), Stawell (Lower), Healesville—TASM.: Zeehan(Findlay), Hobart; from October to December, and in February. Allied to the following species.

118. *C. oxygrammana* Meyr.

(*Acroceuthes oxygrammana* Meyr., Proc. Linn. Soc. N.S.Wales, 1881, 460.)

♂♀. 15-16 mm. Antennal ciliations of ♂  $\frac{1}{3}$ . Forewings in ♂ without fold. Sexes quite similar.

VIC.: Macedon (Lyell), Beaconsfield (Drake)—TASM.: Hobart, Evandale(Raynor); from November to January.

119. *C. epiloma* Low.

(*Cupia epiloma* Low., Trans. Roy. Soc. S. Aust. 1902, 235.)

♂. 15-16 mm. Palpi long. Antennal ciliations 2. Forewings with costal fold narrow, not reaching  $\frac{1}{3}$ . Lower's description is otherwise sufficient.

N.S.W.: Bathurst(Lower), Katoomba(Lyell)—VIC.: Macedon (Lyell); in November and December.

120. *C. effulgens*, n.sp.

♂. 15 mm. Head, palpi, and thorax bronzy-ochreous. Antennal ciliations 1. Abdomen grey. Forewings suboblong, costa anteriorly rather strongly, posteriorly slightly arched, without fold, apex obtuse, termen slightly sinuate, rather oblique; bronzy, ochreous suffusedly mixed with dark grey, towards middle of disc yellow and less mixed with grey; a suffused light ochreous-yellow costal patch extending from  $\frac{1}{3}$  to  $\frac{1}{5}$ , narrowed to extremities. Hindwings rather dark grey.

TASM.: Zeehan(Findlay); in February, one specimen, in poor condition, but a very distinct species. Type in Coll. Lyell.

121. *C. leucostacta*, n.sp.

♂♀. 14-16 mm. Head, palpi, and thorax brownish-ochreous or ferruginous-brownish, variably sprinkled with grey; palpi long. Antennal ciliations of ♂ 1. Abdomen whitish-ochreous mixed with grey. Forewings elongate, suboblong, costa anteriorly rather strongly, posteriorly slightly arched, in ♂ without fold, apex obtuse, termen hardly sinuate, somewhat oblique; brownish-ochreous or brownish, in ♀ mixed or strigulated with ferruginous, obscurely and suffusedly strigulated with grey, with a few blackish scales; costal edge more or less white, irregularly strigulated with blackish-grey; dorsum dotted with white and blackish-grey, with a small white spot before tornus; in ♀ a pale yellow patch reticulated with ferruginous-orange extending along dorsum from  $\frac{1}{4}$  to near tornus, widest in middle and narrowed to extremities: cilia brownish with two dark grey shades. Hind-



wings with 3 and 4 short-stalked; whitish strigulated with grey, in ♀ suffused with light grey; cilia whitish with grey subbasal shade.

N.S.W.: Lawson(Lyell)—VIC.: Beaconsfield(Drake); in November, December, and April, seven specimens (4♂, 3♀).

## 20. ARISTOCOSMA Meyr.

*Aristocosma* Meyr., Proc. Linn. Soc. N. S. Wales,  
1881, 427 ... .. type *chrysophilana*.

Antennæ in ♂ strongly ciliated. Palpi moderate, porrected, second joint dilated with rough scales above and beneath, terminal moderate. Thorax with posterior crest. Forewings with 3 from considerably before angle, 7 and 8 stalked, 7 to termen. Hindwings somewhat narrower than forewings, with 3 from considerably before angle, remote from 4, 4 from angle, 5 rather approximated to 4, 6 and 7 long-stalked.

Contains only the single species; probably a development of *Adoxophyes*.

### 122. *A. chrysophilana* Walk.

(*Cucoecia chrysophilana* Walk., Cat. xxviii., 315; *Aristocosma chrysophilana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 428.)

Q.: Brisbane (Ilidge), Stradbroke Island (Turner)—N.S.W.: Newcastle, Sydney; from August to November. The species varies somewhat; Mr. Lyell has a specimen with the costal edge of forewings pale yellowish, but otherwise no pale central costal blotch.

## 21. ATELODORA Meyr.

*Atelodora* Meyr., Proc. Linn. Soc. N. S. Wales,  
1881, 426 ... .. type *pelochytana*.

Antennæ in ♂ shortly ciliated. Palpi moderately long, porrected, second joint dilated with rough scales above and beneath, terminal moderate. Thorax without crest. Forewings with 7 absent. Hindwings with 3 from before angle, tolerably remote from 4, 5 approximated to 4, 6 and 7 stalked.

Only two closely allied species are known. The genus is correlated to the following.

123. *A. pelochytana* Meyr.

(*Atelodora pelochytana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 427.)

Q.: Brisbane(Turner)—N.S.W.: Murrurundi, Newcastle(Raynor)—TASM.: Deloraine; from August to December, and in March. At Brisbane, according to examples of both generations sent by Dr. Turner, the spring (August) form is normal, whilst the autumn (March) form is very much smaller (9 mm.), but not otherwise different.

124. *A. agramma* Low.

(*Atelodora agramma* Low., Proc. Linn. Soc. N. S. Wales, 1900, 408.)

S. AUSTR.: Adelaide(Lower); in October. Nearly allied to the preceding, but quite distinct by the much darker hindwings and cilia.

22. PROCALYPTIS, n.g.

Palpi moderate, porrected, second joint rough-scaled above and beneath, terminal moderate. Thorax without crest. Forewings with 7 and 8 stalked, 7 to termen. Hindwings with 3, 4, 5 approximated at base, 6 and 7 closely approximated towards base.

Only the following species is known.

125. *P. oncota*, n.sp.

♀. 18 mm. Head and thorax reddish-ochreous-brown. Palpi ochreous-whitish tinged with reddish-fuscous. Abdomen pale brownish. Forewings suboblong, costa anteriorly moderately arched, posteriorly nearly straight, apex obtuse, termen slightly rounded, hardly oblique; reddish-brown, obscurely strigulated with darker ochreous-brown, interspaces somewhat mixed with pale grey: cilia glossy brownish-ochreous, darker towards base.

Hindwings pale fuscous obscurely suffused with whitish-yellowish except on margins; cilia pale greyish-ochreous.

W. Aust.: Northampton; in November, one specimen.

### 23. ADOXOPHYES Meyr.

*Adoxophyes* Meyr., Proc. Linn. Soc. N. S. Wales,

1881, 429 ... .. type *heteroidana*.

Antennæ in ♂ shortly ciliated. Palpi moderate, porrected, second joint dilated with rough scales above and beneath, terminal moderate. Thorax without crest. Forewings with 3 from considerably before angle, 7 and 8 long-stalked, 7 to termen. Hindwings with 3 from considerably before angle, remote from 4, 5 approximated to 4, 6 and 7 stalked.

An Indo-Malayan and Australian genus, whose centre of development seems to lie in the region of New Guinea.

### 126. *A. tripselia* Low.

(*Capua tripselia* Low., Trans. Roy. Soc. S. Aust. 1908, 318.)

♂ 12-16 mm., ♀ 16-20 mm. Head dark fuscous, back of crown whitish. Distinct by whitish groundcolour of forewings, and whitish hindwings; markings of forewings edged with dark fuscous, partially filled with variable fuscous suffusion, and more or less marked with brownish-ochreous on veins, in ♀ usually more or less obsolete except two fuscous spots on costa representing central fascia and costal patch; hindwings in ♀ faintly ochreous-tinged, with apex more or less grey.

N.G.: Sariba Island(Meek)—Q.: Cairns(Dodd); in October and November.

### 127. *A. ioterma*, n.sp.

♂. 12-14 mm. Head and thorax whitish-ochreous more or less mixed with ferruginous. Palpi ferruginous-ochreous. Abdomen whitish-ochreous. Forewings rather short and broad, costa moderately arched, with broad fold reaching  $\frac{2}{5}$ , apex obtuse, termen almost straight, vertical, rounded beneath; whitish-ochreous, more ochreous along costa, with a few scattered ferru-

ginous strigulae; lower half of basal patch irregularly marked with ferruginous; other markings brownish outlined with ferruginous; central fascia moderate, very oblique, gradually dilated towards dorsum, extending as a broad streak along costa to base; a somewhat curved fascia from  $\frac{2}{5}$  of costa to termen above tornus, moderately broad in middle and narrowed to extremities, anterior edge curved-prominent beneath costa, posterior edge projecting in middle so as to touch costa near apex: cilia yellowish. Hindwings in Australian form whitish, in New Guinea and St. Aignan examples pale grey tinged with yellowish, in those from Sudest Island rather dark grey; cilia whitish, in darker examples tinged with grey.

N.G.: Samarai, St. Aignan Island, Sudest Island (Meek)—Q.: Cairns (Dodd); from September to November, nine specimens.

128. *A. heteroidana* Meyer.

(*Adoxophyes heteroidana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 429.)

Q.: Rosewood; in September and December.

129. *A. bematica*, n.sp.

♀. 23-25 mm. Head, thorax, and abdomen pale whitish-ochreous. Palpi light yellow-ochreous. Forewings suboblong, costa anteriorly strongly arched, posteriorly nearly straight, apex obtuse, termen sinuate, vertical; pale whitish-ochreous; edge of basal patch and of a narrow central fascia indicated only by a few small dark ferruginous-fuscous strigulae; an elongate-triangular brown patch marked with dark fuscous and grey extending along costa from  $\frac{3}{5}$  to near apex, from posterior side of which two series of dark ferruginous-fuscous strigulae converge to termen above tornus: cilia light fulvous-ochreous, becoming ochreous-whitish towards tornus. Hindwings and cilia ochreous-whitish, cilia slightly yellowish-tinged round apex.

SOLOMON ISLANDS: Treasury I. (Meek); two specimens.

130. *A. vindicata*, n.sp.

♀. 17 mm. Head, thorax, and abdomen whitish-ochreous. Palpi pale ochreous-yellowish, towards base with some brownish scales. Forewings suboblong, costa anteriorly strongly arched, thence nearly straight, apex obtuse, termen sinuate, nearly vertical; whitish-ochreous; basal patch indicated by median and subdorsal ferruginous streaks; central fascia represented by dark fuscous triangular costal and dorsal spots connected by a ferruginous stria, the costal spot also sending a straight ferruginous streak to tornus; a triangular dark fuscous spot on costa about  $\frac{3}{4}$ , whence a ferruginous gradually attenuated streak runs to termen above tornus: cilia whitish-ochreous tinged with yellowish. Hindwings ochreous-whitish; cilia ochreous-whitish, in middle of termen with a greyish-ochreous spot.

S.I.: Choiseul(Meek); one specimen.

131. *A. melichroa* Low.

(*Capua melichroa* Low., Proc. Linn. Soc. N. S. Wales, 1899, 92.)

♂ 15-16 mm., ♀ 18-21 mm. Head and thorax whitish-ochreous or ochreous-yellow. Forewings with basal patch sometimes marked with several dark ferruginous-fuscous strigulae towards dorsum; central fascia very narrow, narrowest and sometimes interrupted in disc, rather dark purplish-fuscous mixed with ferruginous; posterior fascia often more or less interrupted in middle. Hindwings whitish-yellowish; cilia in ♀ with a thickened whitish-ochreous spot below middle of termen, centrally tinged with grey.

N.G.: Kei Islands—Q.: Cairns(Dodd), Mackay(Lower); from September to December, and in April. Also occurs in Burma.

132. *A. epizeucta*, n.sp.

♂ 15 mm., ♀ 16-18 mm. Head, palpi, and thorax ochreous-yellowish, thorax posteriorly suffusedly mixed with ferruginous. Abdomen pale ochreous. Forewings in ♂ rather short and broad, in ♀ suboblong, costa moderately arched, in ♂ with broad

fold reaching  $\frac{2}{5}$ , apex obtuse, termen almost straight, vertical, rounded beneath; whitish-ochreous, partially slightly sprinkled with pale reddish-fuscous, costa suffused with ferruginous-yellowish and marked with a few fuscous strigulae; markings dark ferruginous-brown; basal patch represented by an oblique striga not reaching margins and a longitudinal streak or patch below submedian fold; central fascia narrow, straight, oblique, posterior edge irregular and dilated on dorsum; a narrow fascia from  $\frac{3}{4}$  of costa to termen above tornus, broadest towards costa: cilia pale ochreous-yellowish. Hindwings ochreous-whitish, in ♀ faintly greyish-tinged towards dorsum; cilia whitish-yellowish, in ♀ with a thickened patch of grey scales in a situation below middle.

S.I.: Isabel I.(Meek), two females(type)—N.G.: Woodlark I., in April(Meek), one male.

133. *A. panxantha* Low.

(*Capua panxantha* Low., Trans. Roy. Soc. S. Aust. 1901, 75.)

♀. 16-20 mm. Head and thorax ochreous, thorax sometimes sprinkled with fuscous. Forewings yellow-ochreous, with pale glistening iridescence, strigulated with darker; markings more or less indicated by dark reddish-fuscous irroration, indefinite; basal patch with outer edge oblique, sometimes obsolete; central fascia very narrow, oblique: a triangular costal patch, with traces of a connection with termen above tornus: cilia yellow-ochreous. Hindwings ochreous, dorsal third tinged with fuscous.

Q.: Cooktown (Lower)—N. Aust.: Port Darwin (Bleaser); in February.

134. *A. templana* Pag.

(*Tortrix templana* Pag., Zoologica xxix., 225.)

♀. 17-20 mm. Head and thorax ochreous-yellow, sometimes marked with ferruginous-orange. Forewings suboblong, costa anteriorly moderately arched, posteriorly nearly straight, apex obtuse, termen almost straight, vertical; yellow, strigulated with ferruginous-orange; markings formed by suffusion of similar

strigulæ, variably spotted or suffused with fuscous and sprinkled with black; basal patch very ill-defined, much widest on dorsum, edge angulated below middle, sometimes connected at this point by dark suffusion with central fascia; central fascia narrow, oblique, abruptly dilated posteriorly on dorsum to reach tornus; costal patch suboblong, lower anterior angle distinct and sometimes connected by a thick bar with middle of central fascia, lower posterior angle sending a more or less marked gradually diminishing streak to termen above tornus: cilia yellow. Hindwings whitish-ochreous, sometimes slightly tinged with fuscous towards dorsum; cilia whitish-ochreous.

S.I.: New Georgia, Treasury I., Guadalcanar(Meek)—BISMARCK ISLANDS: Kinigunang, New Britain—N.G.: Woodlark I.(Meek)—N. AUST.: Port Darwin.

135. *A. fasciculana* Walk.

(*Portrix fasciculana* Walk., Cat. xxxv., 1785; *Adoxophyes cyrtosema* Meyr., Trans. Ent. Soc. Lond. 1886, 276; *Capua epipepla* Low., Trans. Roy. Soc. S. Aust. 1908, 318.)

TONGA(Mathew)—FIJI(Lucas)—S.I.: Guadalcanar, Isabel I.(Meek)—N.G.: St. Aignan I.(Meek)—MOLUCCAS: Ceram—Q.: Cairns(Dodd); in November and December.

136. *A. privatana* Walk.

(*Dichelia privatana* Walk., Cat. xxviii., 320.)

Much like *A. fasciculana*, with similarly broad costal fold and large anal tuft of ♂; forewings with groundcolour more or less wholly suffused with fuscous, margins of fasciæ straighter and more regular (not so sinuate-curved), edge of basal patch defined throughout, furcate branches of central fascia narrower; hindwings grey, tinged with ochreous towards costa (in *A. fasciculana* light fulvous-ochreous).

N.G.: Fergusson I.; in October, one specimen. Common in India, Burma, and Ceylon.



## 24. HOMONA Walk.

- Homona* Walk., Cat. xxviii., 424(1863)... .. type *coffearia*.  
*Ericia* Walk., Cat. xxxv., 1802(1866) ... .. type *astivana*.  
*Anisogona* Meyr., Proc. Linn. Soc. N. S. Wales,  
 1881, 464 ... .. type *similana*.

Antennæ in ♂ ciliated. Palpi rather short, ascending, with appressed scales, terminal joint short. Thorax without crest. Forewings with 3 from angle, 7 and 8 stalked, 7 to termen. Hindwings with 3 and 4 connate, 5 approximated to 4 at base, 6 and 7 stalked.

A development of *Cucæcia*, to which it closely approaches. Besides the following, there are a few closely allied Indo-Malayan species. The typical *H. coffearia* is a highly prolific and injurious pest of tea-plantations in Ceylon.

137. *H. mediana* Walk.

(*Pandemis mediana* Walk., Cat. xxviii., 311.)

♂♀. 18-20 mm. Head and thorax reddish-fuscous or reddish-grey, sides of crown tinged with whitish. Antennal ciliations in ♂ 1. Abdomen grey. Forewings elongate, posteriorly dilated, costa anteriorly moderately arched, in ♂ without fold, posteriorly in ♂ almost straight, in ♀ slightly sinuate, apex obtuse, termen sinuate, rather oblique; brownish, reddish-fuscous, or reddish-grey, with transverse series of darker strigulæ except in darkest specimens; basal patch and central fascia sometimes obscurely darker but usually obsolete; costal patch darker, triangular, sometimes obsolete; sometimes a semioval blotch of dark fuscous suffusion extending over posterior  $\frac{2}{3}$  of dorsum: cilia rather dark fuscous, with a whitish tornal patch. Hindwings grey; costal half whitish, with some small scattered grey spots, towards apex tinged with ochreous; apex itself sometimes suffused with grey; cilia grey-whitish, with grey subbasal line.

N.S.W.: Blackheath, 3500 feet—VIC.: Beaconsfield, Lorne (Lyell), Healesville—TASM.: Deloraine, Hobart—S. AUST.: Mount Lofty; from October to December, and in March. Forewings



narrower anteriorly than in *H. similana*, with costa less arched and termen more oblique, and easily known by costal half of hindwings whitish, not grey or yellow, in ♀ without thickening of costal cilia towards apex.

138. *H. similana* Walk.

(*Teras similana* Walk., Cat. xxviii., 300; *Anisogona similana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 466.)

Q.: Brisbane, Warwick(Turner), Toowoomba—N.S.W.: Moruya, Hawkesbury(Lyell), Newcastle, Sydney, Bulli—Vic.: Geelong (Trebilcock), Melbourne—S. Aust.: Mount Lofty(Guest); from August to October, and from January to May. Hindwings in ♀ with distinct thickening of costal cilia towards apex.

139. *H. homogama* n.sp.

♀. 13-16 mm. Head, palpi, and thorax pale brownish-ochreous. Abdomen light grey. Forewings suboblong, costa anteriorly strongly arched, posteriorly sinuate, apex obtuse, termen rather strongly sinuate, somewhat oblique; pale brownish-ochreous tinged with brown-reddish; two oblique transverse slightly curved brownish-ochreous lines or streaks sometimes more or less sprinkled with dark brown, representing edge of basal patch and anterior margin of central fascia; a flattened-triangular fuscous costal patch mixed with dark brown and black extending on costa from middle to  $\frac{4}{5}$ , from apex of which a third similar streak runs to tornus; some dark brown strigulae towards apex: cilia pale brownish-ochreous, with light brown-reddish suffused shade, on costa with a small blackish anteapical spot. Hindwings rather dark grey, sometimes faintly reddish-tinged; cilia pale grey, with darker subbasal shade.

N.G.: St. Aignan I.(Meek)—Q.: Cairns(Dodd); in November, five specimens.

140. *H. simana* Meyr.

(*Anisogona simana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 465.)

N.S.W.: Newcastle(Raynor), in September. I have seen no further specimens, but I am informed by Mr. J. H. Durrant, who has examined the single male, now in Lord Walsingham's collection, that it possesses a costal fold, which I failed to detect.

141. *H. fistulata*, n.sp.

♂15 mm., ♀18 mm. Head and thorax ochreous-whitish, face and palpi dark brown. Antennæ in ♂ minutely ciliated. Abdomen whitish-ochreous, in ♀ dorsally suffused with light fuscous. Forewings suboblong, shorter and broader in ♂, costa anteriorly strongly arched, in ♂ without fold, posteriorly in ♂ slightly arched, in ♀ nearly straight, apex obtuse, termen slightly sinuate, nearly vertical; vein 1c bent up and shortly anastomosing with 2 near origin, stalk of 7 and 8 very long; in ♂ whitish-ochreous, in ♀ brownish-ochreous tinged with grey; edge of basal patch indicated by a curved brown line; a small semicircular dark brown spot on middle of costa; a slightly incurved brown line from middle of disc to middle of dorsum; four very small dark brown spots or elongate marks on costa posteriorly; a few small scattered dark brown strigulae towards termen: cilia in ♂ whitish-ochreous, in ♀ pale ochreous mixed with grey. Hindwings in ♂ whitish-ochreous, slightly fulvous-tinged towards apex, in ♀ fuscous, becoming pale fulvous-ochreous posteriorly; some small scattered grey spots posteriorly; cilia as in forewings.

Q.: Cairns(Dodd), in September and October, five specimens.

142. *H. æstivana* Walk.

(*Ericia æstivana* Walk., Cat. xxxv., 1803; *E. posticana* ib. 1803.)

♂. 26-30 mm. Head, palpi, and thorax pale yellow-ochreous more or less mixed or suffused with reddish-brown. Antennal ciliations 1. Abdomen hairy, ochreous yellow. Forewings sub-oblong, posteriorly markedly dilated, costa slightly arched, without fold, apex obtuse, termen faintly sinuate, little oblique; reddish-ochreous-fuscous; costa sometimes suffused with ferruginous; basal area sometimes irregularly suffused with dark fuscous, tending to unite with an irregular spot of ferruginous

or dark fuscous suffusion above and before middle of disc; sometimes a short blackish streak along upper part of termen: cilia reddish-ochreous-fuscous. Hindwings ochreous-orange; cilia ochreous-yellowish tinged with reddish-fuscous.

♀. 30 mm. Forewings formed as in *H. mermerodes* ♀; light ochreous-brown, with scattered dark fuscous strigulae. Hindwings ochreous-yellow; cilia grey-whitish, greyer towards base.

N.G.: Fakfak, St. Aignan I.(3 males), Woodlark I.(1 female) (Meek); in November and April. Also from the Philippines. The female specimen is conjecturedly referred to this species on account of the yellow hindwings; but it might be a variety of *H. mermerodes*; the sexes in this genus differ so much that it is difficult to be sure of their identity unless taken together.

143. *H. mermerodes*, n.sp.

♂. 21-26 mm. Head, palpi, and thorax pale greyish-ochreous or brownish-ochreous, variably mixed or suffused with fuscous or reddish-brown. Antennal ciliations 1. Abdomen hairy, greyish-ochreous or grey. Forewings suboblong, slightly dilated posteriorly, costa moderately arched, faintly sinuate in middle, without fold, apex obtuse, termen faintly sinuate beneath apex, bowed, rather prominent; pale greyish-ochreous or brownish-ochreous, often variably tinged or mixed with ashy-fuscous or light brown-reddish; sometimes the dark suffusion is confined to costal or dorsal area; lower part of basal patch sometimes represented by a blotch of dark suffusion; central fascia often indicated by an irregular spot edged with dark fuscous or deep ferruginous above middle, sometimes narrowly connected with costa; usually a narrow apical patch of dark suffusion, often edged on lower half by a dark fuscous streak and marked on costa with some small dark fuscous spots: cilia varying from whitish-ochreous to pale fuscous. Hindwings rather dark grey; cilia varying from grey to grey-whitish.

♀. 29-36 mm. Forewings oblong, costa very abruptly arched towards base, posteriorly slightly sinuate, apex round-pointed,

prominent, termen concave below apex, rounded-prominent beneath; brownish-ochreous, brownish, reddish-fuscous, or rather dark ashy-fuscous tinged with reddish, darker specimens sometimes strigulated with dark fuscous; anterior edge of central fascia sometimes indicated towards costa by a dark fuscous oblique striga; usually two or three dark fuscous elongate marks on costa posteriorly; sometimes indications of blotches of dark suffusion towards dorsum posteriorly, and on apical area, but these are quite indefinite: cilia varying from pale ochreous to grey, sometimes with dark grey subbasal shade. Hindwings fuscous or rather dark fuscous, usually more or less tinged with orange-fulvous, sometimes strongly; cilia greyish.

S.I.: Rendova, Gizo—N.G.: Fakfak, Mailu, Sudest I., St. Aignan I., Goodenough I., Trobriand I., Rossel I., Fergusson I., Woodlark I.(Meek)—Q.: Cairns(Dodd); in April, July, November, and December; twenty-six specimens(12♂, 14♀). Both sexes are very variable in colour.

144. *H. pharangitis*, n.sp.

♂. 16-17 mm. Head, palpi, and thorax fuscous. Antennal ciliations  $\frac{1}{2}$ . Abdomen pale greyish-ochreous. Forewings oblong, rather broad, costa anteriorly strongly arched, posteriorly straight, with broad semioval fold reaching from base to  $\frac{1}{3}$ , apex obtuse, termen sinuate, vertical; 1c bent and approximated to 2 near origin, stalk of 7 and 8 rather short; pale whitish-fuscous, with scattered brownish-ochreous strigulae mixed with fuscous and partially slightly tinged with reddish; a large basal patch of dark ashy-reddish-fuscous suffusion, its edge straight, oblique, suffused, running from  $\frac{1}{3}$  of costa to  $\frac{2}{3}$  of dorsum; in one specimen the dark strigulation obscurely indicates a triangular costal patch beyond middle: cilia whitish-ochreous somewhat mixed with light brown-reddish, with suffused grey subbasal shade. Hindwings fuscous, basal half darker fuscous; cilia pale fuscous, tip mixed with whitish.

Q.: Cairns(Dodd); in October and April, two specimens.

145. *H. spargotis*, n.sp.

♂. 17-18 mm. Head and thorax brownish-ochreous, face and palpi brownish. Antennal ciliations 1. Abdomen grey, anal tuft pale ochreous. Forewings oblong, costa anteriorly moderately arched, posteriorly straight, with broad semioval fold reaching to beyond  $\frac{1}{3}$ , apex obtuse, termen rounded, somewhat oblique; light brownish-ochreous, sprinkled with pale reddish-fuscous; costal fold suffused with reddish-fuscous irroration; a dorsal patch of dark fuscous or reddish-fuscous suffusion before central fascia; central fascia entire, reddish-fuscous, rather narrow towards costa, with a few black specks beneath costa, rather broadly dilated towards dorsum; an apical patch of reddish-fuscous suffusion, its anterior edge subconcave, running from  $\frac{2}{5}$  of costa to about middle of termen: cilia pale ochreous. Hindwings dark grey, extreme apex tinged with fulvous; cilia grey-whitish, with grey subbasal shade.

♀. 25-26 mm. Hardly differs from *H. phancea* ♀; face and palpi irrorated with fuscous; forewings with costa more abruptly arched anteriorly, without sinuation before middle; edge of basal patch somewhat curved.

Q.: Cairns(Dodd)—N. AUST.: Port Darwin(Bleeser); in October, April, and May, six specimens.

146. *H. phancea*, n.sp.

♂. 20-22 mm. Head and thorax brownish-ochreous or brownish, face and palpi ferruginous-brown. Antennal ciliations 1. Abdomen brownish-ochreous. Forewings suboblong, costa anteriorly moderately arched, posteriorly straight, with broad semi-oval fold reaching  $\frac{2}{5}$ , apex obtuse, termen slightly sinuate beneath apex, hardly oblique, rounded beneath; pale yellow-ochreous or brownish-ochreous, with scattered grey strigulae; costal fold brownish-ochreous, with several grey costal strigulae; rest of basal patch brownish-ochreous or dark brown, outer edge angularly produced on dorsum; central fascia represented by a rather small rounded-triangular fuscous spot edged with dark fuscous on costa before middle, and a quadrate fuscous blotch

edged laterally with brown on dorsum before tornus, anterior edge extended as a brown streak to above and before middle of disc; a somewhat curved brown streak from before  $\frac{2}{3}$  of costa to termen above tornus, apical area beyond this more or less suffused with fuscous, with three brown marks on costa posteriorly: cilia pale ochreous. Hindwings light orange-ochreous suffused with pale fuscous except towards costal area; cilia pale ochreous tinged with fuscous.

♀. 27-30 mm. Head, palpi, and thorax brownish-ochreous. Abdomen light ochreous-orange. Forewings elongate-oblong, costa anteriorly strongly arched, slightly sinuate before middle and again on posterior half, apex rounded-prominent, termen concave beneath apex, little oblique, rounded beneath; brownish-ochreous, finely strigulated with fuscous; markings more or less partially infuscated, sometimes very slightly, edged with fine brown striae; basal patch with outer edge oblique, obtusely angulated above middle or almost straight; central fascia broad, oblique, rather narrowed towards costa; apical patch as in ♂ but less marked: cilia pale brownish-ochreous. Hindwings light ochreous-orange, towards termen sometimes tinged with fulvous; cilia concolorous.

S.I.: Isabel I., Rendova, Choisenl, Treasury I.(Meek)—N.G.: St. Aignan I.(Meek), Kei Is.; sixteen specimens.

#### 25. CACÆCIA Hb.

*Cacæcia* Hb., Verz. 388(1826)... .. type *xylosteara*.

*Cryptoptila* Meyr., Proc. Linn. Soc. N. S. Wales,

1881, 481 ... .. type *australana*.

Antennæ in ♂ ciliated. Palpi rather short, ascending, with appressed scales, terminal joint short. Thorax without crest. Forewings with 3 from angle, 7 and 8 separate, 7 to termen. Hindwings with 3 and 4 connate, 5 approximated to 4 at base, 6 and 7 approximated towards base.

This genus, being now separated from *Tortrix* by the difference in palpi instead of the costal fold, is much reduced in extent, so

far as Australian species are concerned; it contains, however, a considerable number of species in the Northern hemisphere. The name *Archips* Hb., lately revived for this genus by Lord Walsingham, being published wholly without characters, cannot be adopted, and being moreover obsolete for a century, is doubly barred.

147. *C. thysanoma*, n.sp.

♂. 18-20 mm. Head, palpi, and thorax fuscous. Antennal ciliations  $\frac{1}{2}$ . Abdomen grey. Forewings suboblong, posteriorly hardly dilated, costa anteriorly gently arched, posteriorly nearly straight, with broad semioval fold not reaching  $\frac{1}{3}$ , apex obtuse, termen sinuate, little oblique; rather dark bronzy-fuscous; series of dark fuscous strigulae accompanied by some whitish-ochreous scales indicating edges of basal patch and broad rather oblique central fascia, and others towards apex and before termen; costal fold filled with curved expansible whitish hairs: cilia brownish suffusedly barred with dark grey, on tornus and at tips suffused with whitish-ochreous. Hindwings fuscous suffusedly strigulated with darker, towards costa especially posteriorly obscurely whitish-suffused between the dark strigulae; cilia whitish-grey, with dark grey subbasal shade.

Q.:Brisbane(Turner); three specimens.

148. *C. ursina*, n.sp.

♂. 19 mm. Head light greyish-ochreous. Palpi pale greyish-ochreous sprinkled with fuscous, above with white expansible hairs. Antennae light greyish-ochreous, ciliations  $\frac{1}{2}$ . Thorax light greyish-ochreous mixed with red-brown. Abdomen whitish-ochreous sprinkled with fuscous. Forewings oblong, costa anteriorly moderately arched, posteriorly nearly straight, costal fold rather broad, reaching  $\frac{1}{3}$ , apex obtuse, termen faintly sinuate, hardly oblique; fuscous or brownish, more or less tinged with reddish, towards costa mixed with pale greyish-ochreous, with scattered dark red-brown strigulae mixed with dark fuscous; markings deep red-brown mixed with blackish; basal patch rather small, formed of irregular strigulae, outer edge angulated.

in middle; central fascia indicated on upper half by interrupted margins, and in disc by an oblique patch of suffusion, beneath this obsolete; costal patch moderate, semioval, well-defined, on costa marked with pale greyish-ochreous; a small costal spot beyond this: cilia fuscous mixed with red-brown. Hindwings grey, faintly darker-strigulated; cilia light grey, with darker subbasal shade.

Q.: Mount Tambourine(Turner); in November, two specimens.

149. *C. polygraphana* Walk.

(*Tortrix polygraphana* Walk., Cat. xxviii., 330; *Cacœcia polygraphana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 495.)

Palpi in ♂ with expansible whitish hairs above; antennæ in ♂ whitish above, with a short black streak on stalk near base. This latter character is peculiar to the species, and will distinguish it from all similar insects. The species is nearly allied to the two preceding, and the resemblance to some species of *Tortrix* (*T. ferrea*, *T. pyrosemana*, and *T. laganodes*) is superficial only; the structural characters of palpi and broad costal fold afford clear distinctions.

Q.: Stanthorpe (Turner)—N.S.W.: Glen Innes (3500 feet), Blackheath (3500 feet), Bathurst (2500 feet), Mount Kosciusko (5000 feet)—VIC.: Mount St. Bernard(5000 feet), Beaconsfield, Gisborne (Lyell), Melbourne—TASM.: Launceston, Campbelltown, Deloraine, George's Bay, Hobart—S. AUST.: Mount Lofty, Bala-klava, Mount Gambier(Guest); from November to March.

150. *C. australana* Lew.

(*Tortrix australana* Lew., Ins. N. S. Wales 11, pl.17; *Teras immersana* Walk., Cat.xxviii., 302; *Cryptoptila immersana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 481, 535; *Cacœcia australana* ib. 485.)

Varies considerably; there is a common variety of ♂ with pale thorax and basal patch of forewings, which gives it a distinct appearance; also there is a form of ♀ in which the markings are quite as in normal ♂; the other and diverse form arises from this



by the development of pale variegation; all intermediates occur. The costal tuft of hindwings in ♀, though peculiar amongst Australian species, and unusually well-developed, occurs in a less conspicuous form in many other species of the genus.

Q. : Killarney (Turner), Rosewood—N.S.W. : Newcastle, Sydney—VIC. : Mount Macedon (3000 feet), Gisborne (Lyell), Melbourne, Trafalgar; from September to February. Larva on ivy (*Hedera*), honeysuckle (*Lonicera*), *Embothrium*, etc. Mr. Lyell found the larvæ gregarious, "hundreds together," in a great web on leaves of "mountain ash" on Mount Macedon, perhaps only due to unusual abundance, as I found them feeding separately.

#### 26. CHRESMARCHA, n.g.

Head with appressed scales, face smooth. Antennæ in ♂ moderately ciliated. Palpi rather short, porrected, second joint shortly rough-scaled, terminal short. Thorax without crest. Forewings with 3 from considerably before angle, 7 and 8 in ♂ stalked, in ♀ separate, 7 to termen. Hindwings with 3 in ♂ remote from angle, parallel to 4, in ♀ approximated to 4, 5 rather approximated to 4, 6 and 7 short-stalked.

Type *C. sibyllina*. This and the next two genera belong to a curious group differing from the normal type of the family by their smooth heads and bright colouring, but otherwise entirely conformable; they appear to be a development of *Tortrix*.

#### 151. *C. delphica*, n.sp.

♂. 21 mm. Head and palpi orange. Thorax pale whitish-yellow. Abdomen pale ochreous, two apical segments blackish. Forewings elongate, suboblong, costa without fold, towards base strongly, posteriorly slightly arched, apex obtuse, termen rounded, slightly oblique; silvery-white; costal edge black, from near base to apex with a series of attached irregular black marks at first very small but gradually increasing to near apex, where they reach  $\frac{1}{4}$  across wing; a transverse black spot in disc near termen; a narrow black streak along termen, tending to be interrupted into two or three separate marks on lower half; apical area

faintly yellowish-tinged: cilia white, on termen with a blackish basal line interrupted on lower portion, not reaching tornus. Hindwings yellowish-white; a moderate suffused dark grey streak along upper half of termen; cilia white, with a dark grey basal line opposite dark patch. Undersurface of all wings white, with black markings much as above.

N.G.: Biagi, Mambare R., (5000 feet; Meek); one specimen.

152. *C. sibyllina*, n.sp.

♂ 21 mm., ♀ 18 mm. Head and palpi orange. Thorax light yellowish, in ♀ white posteriorly. Abdomen ochreous-yellow, basal and two apical segments blackish (in ♀ broken). Forewings elongate, suboblong, costa without fold, towards base strongly, posteriorly slightly arched, apex obtuse, termen rounded, slightly oblique; silvery-white; costal edge black, very finely towards base, in ♂ posteriorly gradually much thickened and irregular-edged, in ♀ slender; some pale yellowish suffusion towards apex, and in ♀ on veins near termen; in ♂ a slender irregular black streak along termen preceded above middle by an irregular transverse black mark, in ♀ with a terminal series of black marks on veins connected on termen: cilia white, in ♂ with a blackish terminal line except towards tornus. Hindwings dark grey, darker towards apex; cilia white, with grey basal line. Undersurface of all wings dark grey, in ♂ hindwings mixed with whitish.

N.G.: Ougarra(Meek); two specimens. Very like the preceding, but immediately known by the different hindwings and undersurface.

27. ZACORISCA, n.g.

Head smooth-scaled. Palpi long, porrected, second joint thickened with dense appressed scales, terminal rather long, cylindrical, obtuse. Thorax without crest. Forewings with 3 from angle, 7 separate, to termen. Hindwings with 3 and 4 connate, 5 closely approximated to 4 at base, 6 and 7 stalked.

153. *Z. holantha*, n.sp.

♀. 28 mm. Head, palpi, and thorax deep iridescent blue. Abdomen blue-blackish, apex ochreous-white suffused beneath with ochreous-yellow. Forewings elongate, rather narrow, costa moderately arched, apex obtuse, termen slightly rounded, almost vertical; deep iridescent blue; a rather narrow deep coppery-red terminal fascia: cilia purplish-coppery, above apex and below tornus deep blue. Hindwings blackish suffused with deep blue; cilia bright purple-blue with coppery reflections, with deep blue basal line.

N.G.: Owgarra(Meek); one specimen.

## 28 ATTERIA Walk.

*Atteria* Walk., Cat. xxviii., 421(1863) ... type *strigicinctana*.

*Cerace* Walk., Cat. xxviii., 422(1863) ... type *stipitata*.

Head smooth-scaled. Antennæ in ♂ simple. Palpi rather long, porrected, second joint with smooth appressed scales, terminal moderately long, cylindrical. Thorax without crest. Forewings with 3 from angle, 7 separate, to termen. Hindwings with 3, 4, 5 approximated at base, 6 and 7 approximated towards base.

A genus of moderate extent, characteristic of S. Asia, the Malayan region, and S. America.

154. *A. thiasodes*, n.sp.

♂. 36 mm. Head, palpi, thorax, and abdomen deep blue, upper and lower margins of face whitish, anal tuft shining whitish-ochreous. Forewings suboblong, rather dilated posteriorly, costa anteriorly moderately, posteriorly slightly arched, with moderately broad costal fold from base to near  $\frac{1}{3}$ , thence abruptly narrowed and continued to  $\frac{2}{3}$ , apex obtuse, termen hardly sinuate, almost vertical; orange; markings bright deep purple-blue; a short streak on base of costa; central fascia rather broad, oblique, extended on costa along narrow portion of fold, narrowed on dorsum, posterior edge angulated towards dorsum;

a triangular apical patch extending over  $\frac{1}{4}$  of costa and  $\frac{3}{4}$  of termen: cilia dark grey with deep blue subbasal shade, with an orange tornal patch. Hindwings blackish-purple; a deep orange terminal fascia, broad on costa and containing a blackish-purple apical blotch almost united with main area by blackish irroration, gradually narrowed downwards and hardly reaching tornus; cilia orange-ochreous, on dorsum and round apex dark grey.

♀. 36-40 mm. Head, palpi, thorax, and abdomen deep iridescent blue. Forewings formed as in ♂, without fold; orange; base very narrowly deep blue, shortly produced along costa; a large triangular deep purple apical patch, edge running from about middle of costa to tornus: cilia deep purple-blue round patch. Hindwings deep orange; a rounded purple-blackish apical blotch; cilia orange, on dorsum and round apex dark grey.

N.G.: Biagi, Mambare R.(5000 feet), Aroa R.(Meek), Fakfak; six specimens.

#### 29. TORTRIX Linn.

*Tortrix* Linn., Syst. Nat. x., i., 496(1758) ... type *viridana*.

*Lozotania* Steph., Cat. Brit. Ins. 169(1829) ... type *forsterana*.

Antennæ in ♂ moderately ciliated. Palpi moderate or long, porrected, second joint dilated with rough scales above and beneath, terminal moderate. Thorax without crest. Forewings with 3 from angle, 7 separate, to termen. Hindwings with 3 and 4 connate, 5 approximated to 4 at base, 6 and 7 approximated towards base.

Largely represented in all regions; it is probable, however, that the Australian species form a homogeneous group developed locally. Many species possess the costal fold in ♂, but it is usually slight and narrow. The full generic synonymy is not given above.

#### 155. *T. molesta*, n.sp.

♂ 16mm., ♀ 17-19mm. Head pale ochreous, between antennæ mixed with fuscous. Palpi whitish-ochreous sprinkled with fuscous. Antennal ciliations of ♂ minute. Thorax pale ochreous somewhat sprinkled with fuscous. Abdomen grey. Forewings

suboblong, in ♀ somewhat more elongate, costa anteriorly moderately arched, posteriorly nearly straight, costal fold in ♂ moderately broad, reaching to near middle, apex obtuse, termen nearly straight, rather oblique; whitish-ochreous more or less tinged with pale brownish, especially posteriorly; a very few small scattered dark fuscous strigulae on costa; central fascia very oblique, fuscous, rather narrow, somewhat marked with dark fuscous on costa, slightly dilated towards dorsum, anterior edge slightly concave below middle; an irregular rounded-triangular fuscous spot suffusedly irrorated with blackish close before middle of termen: cilia whitish-ochreous, at apex and tornus with fuscous bars mixed with black. Hindwings grey; cilia ochreous-whitish more or less tinged with grey, with grey subbasal shade.

Q.: Cairns(Dodd); from September to November, three specimens. Recognisable by the characteristic blotch before termen; the costal fold of ♂ is more strongly developed than in any other Australian species of the genus.

. 156. *T. calculata*, n.sp.

♂. 17 mm. Head, palpi, thorax, and abdomen whitish-ochreous; palpi long. Antennal ciliations 1. Forewings rather elongate-triangular, costa anteriorly moderately, posteriorly gently arched, costal fold narrow, reaching  $\frac{1}{3}$ , slightly dilated with scales towards middle, apex obtuse, termen distinctly sinuate, somewhat oblique; whitish-ochreous, with some small scattered grey strigulae, more numerous towards termen; base of costa slenderly blackish; six blackish dots in disc, viz., two indicating margin of basal patch, one in disc before middle, one towards dorsum beyond middle, one towards costa at  $\frac{3}{5}$ , and one in disc at  $\frac{3}{4}$ : cilia whitish-ochreous. Hindwings ochreous-whitish, faintly tinged with grey; cilia whitish, with faint grey subbasal streak.

TASM.: Deloraine; in November, one specimen. Distinct from all Australian species, and nearly allied by the long palpi and other characters to the New Zealand *T. conditana* Walk. (*T. astrologana* Meyr.), with which I formerly identified it, but now

think it should be kept separate; *T. conditana* is much larger, 22-25 mm., very variable, in some forms very dissimilar, darker-coloured and fasciated; pale specimens in which the normal markings are obsolete certainly approximate, but the hindwings are always more or less spotted with grey.

157. *T. xylodes*, n.sp.

♂. 17-23 mm. Head and thorax whitish-ochreous, sometimes brownish-tinged, usually more or less wholly tinged or suffused with fuscous, thorax with a more or less marked dark fuscous transverse bar before middle. Palpi whitish-ochreous irrorated with fuscous or dark fuscous. Antennal ciliations  $1\frac{1}{2}$ . Abdomen pale greyish-ochreous mixed with grey. Forewings suboblong, costa anteriorly moderately arched, posteriorly straight, costal fold narrow, reaching to near middle, somewhat dilated with diminishing scales on posterior  $\frac{2}{3}$ , apex obtuse, termen almost straight, little oblique, rounded beneath; whitish-ochreous to brownish-ochreous, sometimes more or less irrorated with fuscous, on margins and towards termen strigulated with dark fuscous or blackish; basal patch brownish, with a few blackish strigulae, outer edge above middle with an irregular acute angular projection more or less edged with black strigulae; central fascia brownish or fuscous, oblique, upper half rather narrow, well-defined and more or less marked with black, with an acute angular projection on posterior edge above middle, lower half more or less suffused and indistinct, posteriorly confluent with an irregular patch extending over tornus and lower  $\frac{3}{4}$  of termen; costal patch brownish or fuscous, very elongate and narrow, extending along costa from middle to near apex, sometimes suffused with upper part of central fascia into a large triangular blotch which in one specimen is dark fuscous; cilia whitish-ochreous, sometimes partially brownish-tinged, with an interrupted dark grey subbasal line. Hindwings light grey, spotted with darker, whitish along costa and sometimes somewhat suffused with whitish towards dorsum; cilia whitish, with somewhat interrupted dark grey subbasal line.

♀. 23-26 mm. Forewings more elongate than in ♂, fuscous or brownish; markings darker, formed as in ♂, but suffused and indistinct, sometimes almost wholly obsolete. Hindwings as in ♂, sometimes more whitish-tinged.

N.S.W.: Mount Victoria (3000 feet)—VIC.: Beaconsfield, Gisborne, Macedon, Lorne(Lyell)—TASM.: Launceston(Lea), Hobart (Turner)—W. AUST.: Albany; from August to February, fourteen specimens. Larva cylindrical, rather attenuated at extremities, with a few whitish hairs; bright yellowish-green; dorsal line dark green; head greenish-ochreous: feeds between joined leaves of *Pultenea* sp., in September and October.

158. *T. ashworthana* Newm.

(*Portrix ashworthana* Newm., Trans. Ent. Soc. Lond.(n.s.) iii., 286; *Teras responsana* Walk., Cat. xxviii., 297; *Pandemis secundana* ib. 310; *Cacæcia responsana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 500.)

Q.: Toowoomba (Turner)—N.S.W.: Glen Innes (3500 feet), Sydney—VIC.: Gisborne, Macedon, Melbourne(Lyell)—TASM.: Launceston, Deloraine, Hobart; from September to April. Larva amongst spun shoots of *Acacia decurrens*. I am now satisfied that the description of *T. ashworthana* can only be referred to this species; I do not know where the type-specimen is.

159. *T. postvittana* Walk.

(*Teras postvittana* Walk., Cat. xxviii., 297; *T. retractana* ib. 288; *T. scitulana* ib. 298; *T. basialbana* ib. 299; *T. secretana* ib. 300; *Pandemis consociana* ib. 311; *Dichelia reversana* ib. 321; *D. fedana* ib. 321; *D. vicariana* Walk., Char. Het. 82; *Cacæcia postvittana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 502.)

Q.: Bundaberg, Brisbane, Stradbroke Island, Mount Tambourine(Turner)—N.S.W.: Glen Innes (3500 feet), Newcastle, Sydney, Orange, Kiama, Mount Kosciusko (4500 feet)—VIC.: Melbourne, Casterton—TASM.: Launceston, Deloraine, Hobart—S. AUST.: Mount Gambier, Mount Lofty, Port Lincoln—W. AUST.: Albany; from August to April. Also occurs in New Zealand

and Hawaiian Islands, but doubtless artificially introduced from Australia. Larva amongst spun leaves, flowers, and seeds of *Correa*, *Persoonia*, *Grevillea*, *Boronia*, etc., and has been bred from an apple.

160. *T. stipularis*, n.sp.

♂. 17 mm. Head, palpi, and thorax pale ochreous, palpi whitish beneath. Antennal ciliations 1. Abdomen whitish-grey. Forewings suboblong, costa anteriorly moderately arched, posteriorly nearly straight, costal fold narrow, reaching  $\frac{2}{5}$ , triangularly dilated with scales towards its middle, apex obtuse, termen rounded, rather oblique; whitish-ochreous; markings rather light yellow-ochreous; costal fold marked with several blackish strigulae; basal patch faintly indicated, outer edge angulated above middle; central fascia oblique, towards costa moderate, posterior edge forming a strong angular dilation in middle, beneath this hardly defined posteriorly except on dorsum where it is broad, with traces of a faint streak rising from it parallel to termen; costal patch flattened-triangular, beginning at  $\frac{2}{5}$  but undefined posteriorly: cilia whitish-ochreous. Hindwings light grey; cilia whitish.

Vic.: Murtoa(Lyell); in February, one specimen. Type in Coll. Lyell.

161. *T. pyrrhula*, n.sp.

♂. 17 mm., ♀. 18 mm. Head whitish-ochreous, face with a ferruginous transverse bar. Palpi whitish-ochreous irrorated with ferruginous. Antennal ciliations in ♂ 1. Thorax whitish-ochreous irrorated or suffused with ferruginous-ochreous. Abdomen ochreous-whitish. Forewings suboblong, in ♂ rather dilated posteriorly, costa anteriorly moderately arched, posteriorly straight, in ♂ with very slight fold from base to  $\frac{2}{5}$ , somewhat enlarged with scales towards its middle, apex obtuse, termen in ♂ slightly rounded, in ♀ almost straight, little oblique, rounded beneath; whitish-ochreous tinged with yellowish, in ♂ sprinkled and on margins strigulated with ferruginous-ochreous, in ♀ suffused with ferruginous-ochreous and strigulated throughout



with ferruginous, strigulae posteriorly irrorated with dark grey; markings in ♂ ferruginous-ochreous, in ♀ ferruginous sprinkled with dark grey; central fascia oblique, rather narrow and well-defined on upper third, rest broad, irregular, undefined; costal patch flattened-triangular, containing several costal dots of dark grey irroration: cilia in ♂ whitish-ochreous faintly barred with ferruginous-ochreous, in ♀ ferruginous-ochreous with base spotted with dark grey irroration. Hindwings ochreous-whitish indistinctly spotted with pale grey; cilia whitish.

S. AUST.: Port Lincoln; in November, two specimens.

162. *T. liadelpa*, n.sp.

♂. 18-20 mm. Head, palpi, and thorax brownish-ochreous. Antennal ciliations 1. Abdomen ochreous-whitish. Forewings suboblong, costa anteriorly moderately arched, posteriorly straight, costal fold very narrow, reaching  $\frac{2}{3}$ , somewhat expanded with scales towards its middle, apex obtuse, termen nearly straight, hardly oblique, rounded beneath; whitish-ochreous strewn throughout with yellow-ochreous or ferruginous-ochreous strigulae; costal fold ferruginous-ochreous; central fascia very oblique, reddish-fuscous mixed towards middle with ferruginous-ochreous, rather narrow, posterior edge slightly prominent above middle and abruptly dilated into a suffused blotch on dorsal third; costal patch flattened-triangular, reddish-fuscous: cilia whitish-ochreous. Hindwings ochreous-whitish, sometimes greyish-tinged on lower half, thinly spotted with light grey; cilia ochreous-whitish.

♀. 20 mm. Head, palpi, and thorax brownish-yellowish. Forewings as in ♂ but rather more elongate; rather deep yellow-ochreous, strigulated throughout with ferruginous-ochreous without markings: cilia ochreous-whitish. Hindwings as in ♂.

W. AUST.: Albany; in October, three specimens.

163. *T. caryotis*, n.sp.

♂. 21-22 mm. Head, palpi, and thorax whitish-ochreous more or less tinged with ferruginous-brownish. Antennal ciliations 1.

Abdomen light grey, anal tuft ochreous-whitish. Forewings suboblong, costa anteriorly moderately arched, posteriorly straight, costal fold very narrow, reaching middle, its posterior  $\frac{3}{4}$  somewhat expanded with gradually diminishing scales, apex obtuse, termen almost straight, slightly oblique; whitish-ochreous, more or less faintly and suffusedly strigulated with yellow-ochreous; basal half of costal fold suffused with reddish-fuscous; central fascia very oblique, reddish-fuscous more or less marked with purplish-fuscous and ferruginous, rather narrow, posterior edge suffused and indefinite on lower half; costal patch light reddish-fuscous, suffused, narrow, extending from  $\frac{2}{3}$  to apex; a few reddish-fuscous strigulae towards termen: cilia ochreous-whitish, with more or less indicated pale fuscous-reddish subbasal line. Hindwings light grey, indistinctly strigulated with darker; cilia whitish, with grey subbasal line.

♀. 24 mm. Head, palpi, and thorax reddish-brown. Forewings more elongate than in ♂, fulvous-ochreous, suffusedly strigulated with fuscous-reddish; edge of basal patch and of central fascia indicated on dorsum by dark reddish-fuscous strigulae: cilia ochreous-whitish, basal half light reddish-ochreous. Hindwings whitish-grey, becoming ochreous-whitish towards apex, faintly strigulated with grey; cilia whitish, with light grey subbasal line.

N.S.W.: Mount Kosciusko, 5000 feet—VIC.: Mount St. Bernard, 5000 feet (Lyell); in January and February, four specimens.

164. *T. tanyptera*, n.sp.

♂. 24-25 mm. Head, palpi, and thorax ferruginous. Antennal ciliations  $1\frac{1}{2}$ . Abdomen whitish-ochreous. Forewings suboblong, costa anteriorly moderately arched, posteriorly straight, costal fold narrow, reaching  $\frac{2}{3}$ , somewhat dilated with diminishing scales on posterior  $\frac{2}{3}$ , apex obtuse, termen straight, little oblique, rounded beneath; deep ochreous tinged with reddish, more or less strigulated suffusedly with bright ferruginous, especially anteriorly; a few very slight blackish strigulae on costal fold; central fascia little marked, ferruginous, sometimes mixed with

grey, narrow, oblique, almost obsolete in disc, rather broadly dilated posteriorly towards dorsum; sometimes a few scattered blackish scales towards termen: cilia whitish-ochreous tinged with yellow, basal half reddish-ochreous with two or three dark grey dots beneath apex, and a blackish-grey subbasal shade on tornus. Hindwings whitish, partially slightly tinged with grey, strigulated with pale grey, towards apex slightly tinged with yellowish: cilia whitish faintly tinged with yellowish, with a pale grey subbasal shade.

♀. 28-30 mm. Forewings more elongate than in ♂, similarly coloured, without markings, except some more or less indicated minute scattered fuscous-reddish strigulae: cilia deep ochreous more or less tinged with reddish, towards tips yellow-whitish, with a blackish-grey subbasal shade towards tornus and on upper part of termen, between these partially indicated by dots. Hindwings as in ♂, but more or less tinged with fulvous-ochreous towards apex.

VIC.: Melbourne(Kershaw), Gisborne(Lyell); in March and April, "beaten from *Acacia melanoxylon*"(Lyell); five specimens.

165. *T. dotatana* Walk.

(*Teras dotatana* Walk., Cat. xxviii., 298.)

♀. 31 mm. Forewings brownish-ochreous, markings nearly obsolete, dorsum marked with dark fuscous. Hindwings grey-whitish spotted with grey.

TASM.: one specimen in British Museum. I cannot identify this with any species known to me, unless it is the other sex of the following.

166. *T. ophiodesma* Low.

(*Cacocia ophiodesma* Low., Trans. Roy. Soc. S. Aust. 1902, 251.)

♂. 29 mm. Palpi long, with appressed scales. Antennal ciliations 2. Forewings with costal fold very slight, not reaching  $\frac{2}{5}$ , somewhat dilated with diminishing scales on its posterior  $\frac{2}{5}$ ; pale brownish-ochreous; an oblique dark fuscous mark in disc before  $\frac{1}{3}$ ; central fascia narrow, oblique, dark fuscous, sinuate outwards in middle, on lower half becoming ochreous-brownish,

less defined posteriorly, but suffused with dark fuscous anteriorly except towards dorsum; costal patch small, acute-triangular, brownish-ochreous, with angles suffused with dark fuscous; some minute dark fuscous strigulae towards termen: cilia pale brownish-ochreous. Hindwings ochreous-whitish, lower half slightly greyish-tinged except posteriorly, with a few pale grey spots in disc; cilia ochreous-whitish.

TASM.: Sheffield, in November; redescribed from type in Coll. Lyell. As suggested above, it is quite likely that this may be the ♂ of *T. dotatana*, in view of the correspondence in size and Tasmanian origin, but it seems better to await further evidence before uniting them. Veins 6 and 7 of hindwings appear to be very closely appressed towards base, but not truly stalked as stated by Lower.

167. *T. cetrata*, n.sp.

♂. 19 mm. Head, palpi, and thorax ferruginous-ochreous. Antennal ciliations 1. Abdomen ochreous-whitish. Forewings suboblong, costa anteriorly moderately, posteriorly slightly arched, costal fold very narrow, reaching  $\frac{2}{3}$ , slightly expanded with scales on posterior half, apex obtuse, termen slightly rounded, somewhat oblique; ochreous-yellow, margins suffused with ferruginous-ochreous; angulated edge of basal patch faintly indicated with ferruginous-ochreous; markings reddish-fuscous suffused with rather dark fuscous; costal fascia broad, very oblique, narrowed towards costa, costal patch moderate, cloudy, these two suffused together with reddish-fuscous so as to form a very large subtriangular patch, leaving a suffused terminal fascia of groundcolour: cilia ochreous-yellow, paler towards tips. Hindwings grey-whitish; cilia ochreous-whitish.

TASM.: Deloraine; in November, one specimen.

168. *T. cenopa*, n.sp.

♂. 19 mm. Head, palpi, and thorax brownish-ochreous, suffusedly mixed with fuscous-reddish and ferruginous. Antennal ciliations 2. Abdomen pale greyish-ochreous. Forewings sub-

oblong, costa anteriorly moderately arched, posteriorly almost straight, costal fold narrow, reaching  $\frac{2}{5}$ , somewhat dilated with diminishing scales on posterior  $\frac{2}{3}$ , apex obtuse, termen rather obliquely rounded; fuscous-reddish, somewhat mixed with ferruginous, especially on anterior half; extreme edge of costal cilia whitish-ochreous on posterior  $\frac{3}{5}$ ; markings deeper, undefined, suffusedly mixed with rather dark grey; central fascia oblique, rather narrow on upper half, posterior edge expanded so as to form a subquadrate blotch on lower half; costal patch narrow, semioval, very indistinct: cilia light yellowish-ochreous, basal third brown-reddish. Hindwings ochreous-grey-whitish, lower half slightly greyer; cilia ochreous-whitish.

VIC.: Gisborne(Lyell); in March, one specimen. Type in Coll. Lyell. Near *T. cetrata*, but certainly distinct by the longer antennal ciliations.

169. *T. ocyptera*, n.sp.

♀. 22 mm. Head, palpi, and thorax reddish-ochreous tinged with grey. Abdomen light grey. Forewings suboblong, costa moderately arched, apex pointed, termen sinuate, oblique; reddish-ochreous, with small scattered blackish-grey dots and strigulae; extreme costal edge whitish-ochreous; a slender blackish-grey streak along dorsum from  $\frac{1}{4}$  to near middle; central fascia indicated by a small faint grey spot on costa at  $\frac{2}{5}$ , and a subtriangular dorsal blotch of grey irroration before tornus, with posterior angle marked by a triangular black dot: cilia pale whitish-ochreous, round apex and upper part of termen tinged with reddish, and at apex with grey. Hindwings pale greyish strigulated with grey, towards costa and apex suffused with whitish; cilia ochreous-white, towards tornus with a grey basal shade.

VIC.: Macedon(Lyell); in March, one specimen. Type in Coll. Lyell. The form of forewings is distinctive.

170. *T. arcaria*, n.sp.

♂. 21-23 mm. Head, palpi, and thorax varying from pale ochreous to fuscous, palpi long. Antennal ciliations  $\frac{3}{4}$ . Abdo-

men pale greyish-ochreous or grey. Forewings moderately elongate, posteriorly dilated, costa anteriorly moderately, posteriorly gently arched, costal fold very slight and rudimentary, hardly traceable except where somewhat enlarged with scales for a short distance before  $\frac{1}{4}$ , apex rectangular, termen faintly sinuate, somewhat oblique; varying from pale ochreous to fuscous; extremities of central fascia indicated by small obscure suffused darker spots; sometimes a few scattered blackish specks, especially towards termen: cilia concolorous. Hindwings ochreous-whitish, faintly greyish-tinged in disc and towards base, thinly spotted with light grey except towards apex; cilia ochreous-whitish.

♀ 23-24 mm. Forewings more elongate-oblong, not dilated; varying from pale greyish-ochreous to ochreous-fuscous; central fascia sometimes faintly darker, very narrow towards costa, moderately broad and irregular on lower  $\frac{2}{3}$ , with an irregular projection from near dorsum directed towards apex, sometimes quite obsolete. Hindwings as in ♂.

TASM.: Deloraine; in November and December; seven specimens.

171. *T. lycodes*, n.sp.

♂. 23 mm. Head and thorax ochreous mixed with ochreous-whitish, patagia mixed with dark ferruginous-fuscous. Palpi ochreous sprinkled with dark ferruginous-fuscous. Antennal ciliations 1. Abdomen greyish mixed with ochreous-whitish. Forewings suboblong, costa anteriorly moderately arched, posteriorly nearly straight, costal fold very narrow, reaching  $\frac{2}{5}$ , slightly dilated with scales on posterior  $\frac{2}{3}$ , apex obtuse, termen distinctly sinuate, somewhat oblique; ferruginous-brown suffusedly mixed with pale ochreous, anteriorly sprinkled with fuscous; scattered dark fuscous strigulae along costa; basal patch indicated by undefined darker suffusion; central fascia very oblique, darker, on upper half very narrow and mixed with dark fuscous and ferruginous, with an angular projection on posterior edge above middle, on lower half very indistinct, extended as a patch of cloudy suffusion to tornus; costal patch ill-defined, flattened-triangular, extending from middle to near apex, mixed with dark fuscous,

and ferruginous: cilia pale brownish-ochreous mixed with grey on basal half. Hindwings light grey, towards costa with a few darker grey spots and somewhat whitish-tinged partially between these; cilia grey-whitish, with greyish subbasal shade.

TASM.: Mount Wellington, 3500 feet; in December, one specimen.

172. *T. fabricata*, n.sp.

♂♀. 19 mm. Head and palpi brownish-ochreous. Antennal ciliations 1. Thorax ferruginous-ochreous. Abdomen grey, anal tuft grey-whitish. Forewings suboblong, costa anteriorly moderately arched, posteriorly straight, costal fold narrow, reaching to middle, its posterior  $\frac{2}{3}$  somewhat expanded with gradually diminishing scales, apex obtuse, termen straight, somewhat oblique, rounded beneath; light brownish-ochreous; markings yellowish-fuscous mixed with light brown-reddish, dark-edged, well-defined; basal patch moderate, outer edge curved, oblique; central fascia oblique, moderate on upper half, twice as broad on lower half by sudden dilation of posterior margin; an apical patch edged by a sinuate line from before  $\frac{2}{3}$  of costa to termen above tornus: cilia pale brownish-ochreous, round apex tinged with brown-reddish. Hindwings in ♂ dark grey, cilia grey-whitish, with grey subbasal shade; in ♀ grey, broadly whitish towards costa, towards apex ochreous-tinged, cilia whitish.

Vic.: Lorne(Lyell); in February and March, two specimens.

173. *T. jugicolana* Meyr.

(*Cacecia jugicolana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 499.)

N.S.W.: Murrurundi(Raynor); in October. Larva on a species of *Compositae* resembling *Senecio*.

174. *T. sobriana* Walk.

(*Dichelia sobriana* Walk., Cat. xxviii., 322; *Cacecia mnemosynana* Meyr., Proc. Linn. Soc. N.S. Wales, 1881, 504.)

♂♀. 16-18 mm. Sexes quite similar. Hindwings grey-whitish or whitish-grey, spotted with grey.

N.S.W.: Sydney, Bulli—VIC.: Gisborne, Macedon (Lyell), Warragul, Melbourne—TASM.: Hobart; from August to December, and from March to June.

175. *T. psapharana* Meyr.

(*Cacecia psapharana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 174.)

TASM.: Launceston, Hobart; in December and January.

176. *T. peloxythana* Meyr.

(*Tortrix peloxythana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 514.)

N.S.W.: Murrurundi—VIC.: Castlemaine (Drake); in November.

177. *T. plastica*, n.sp.

♂. 18 mm. Head whitish, lower part of face tinged with fuscous. Palpi fuscous. Antennal ciliations 1. Thorax light fuscous. Abdomen light grey, sides and anal tuft whitish. Forewings suboblong, costa anteriorly moderately, posteriorly hardly arched, without fold, apex obtuse, termen almost straight, oblique; white; markings light fuscous mixed with ferruginous-brown and sprinkled with dark fuscous; a moderate basal patch, outer edge angulated in middle; space between this and central fascia sprinkled with pale ferruginous-brownish; central fascia broad, very oblique, somewhat narrowed towards costa, running to tornus, where it unites with a broad terminal fascia narrowed to a point at apex; costal patch flattened-triangular, extending from  $\frac{2}{3}$  to near apex: cilia light fuscous obscurely spotted with light ferruginous-brown, towards tips suffused with whitish. Hindwings whitish-grey; cilia whitish.

TASM.: Mount Wellington, 3000 feet; in February; one specimen.

178. *T. cerussata*, n.sp.

♂. 22-23 mm. Head whitish. Palpi light fuscous, more or less suffused with white above and beneath. Antennal ciliations  $1\frac{1}{4}$ . Thorax whitish, patagia suffused with brownish. Abdomen



grey, anal tuft whitish. Forewings suboblong, costa anteriorly moderately, posteriorly slightly arched, without fold, apex obtuse, termen faintly sinuate, somewhat oblique; ochreous-whitish; markings variably suffused with grey or yellowish-grey, sometimes partially much marked with dark fuscous towards costa; basal patch well-marked on upper half, obsolete towards dorsum, outer edge obtusely angulated in middle; space between this and central fascia towards dorsum more or less strigulated with fuscous, grey, and pale yellowish; central fascia moderately broad, very oblique, well-marked, slightly narrower towards costa, posteriorly somewhat prominent above middle and usually coalescing at this point with costal patch; costal patch semioval, extending from middle of costa to near apex; sometimes a terminal band connecting this and central fascia, variable in development, sometimes reduced to a few strigulae and a transverse dark fuscous mark indicating its anterior margin: cilia ochreous-whitish, basal third fuscous or pale yellowish suffusedly spotted with fuscous. Hindwings whitish strigulated and spotted with grey, sometimes partially sprinkled with grey; cilia whitish, with interrupted fuscous subbasal line.

VIC.: Mount St. Bernard(5000 feet), Macedon(Lyell); in February and March, five specimens.

179. *T. spodota*, n.sp.

♂ 20 mm., ♀ 22.25 mm. Head, palpi, thorax, and abdomen pale whitish-ochreous irrorated or suffused with grey. Antennal ciliations of ♂  $\frac{3}{4}$ . Forewings suboblong, costa anteriorly strongly, posteriorly slightly arched, without fold, apex obtuse, termen in ♂ straight, nearly vertical, in ♀ slightly sinuate, somewhat oblique, rounded beneath; pale whitish-grey-ochreous, more or less suffusedly irrorated with grey; basal patch indicated by increased irroration, sometimes slightly marked with ochreous, very indefinite, outer edge angulated in middle; central fascia moderate, very oblique, becoming broader posteriorly on dorsal half, in ♂ light greyish suffused anteriorly and towards costa with ochreous, in ♀ more or less indicated by grey suffusion, very

indefinite; costal patch in ♂ triangular, greyish, partially marked with ochreous suffusion, in ♀ not traceable; some indefinite dark strigulation towards termen: cilia pale whitish-ochreous. Hindwings whitish, strigulated with grey, in ♂ slightly suffused with greyish: cilia whitish, with greyish subbasal line indicated towards tornus.

Vic.: Macedon(Lyell); in March, three specimens.

189. *T. scleropa*, n.sp.

♂. 21-22 mm. Head and thorax whitish-grey-ochreous, patagia tinged with light brownish-ochreous. Palpi whitish-ochreous sprinkled with grey. Antennal ciliations  $1\frac{1}{2}$ . Abdomen grey-whitish. Forewings suboblong, costa anteriorly moderately, posteriorly slightly arched, without fold, apex obtuse, termen very faintly sinuate, somewhat oblique; very pale ochreous-yellowish sprinkled with white, before central fascia broadly suffused with whitish; central fascia moderate, very oblique; ferruginous-ochreous somewhat sprinkled with dark grey, anterior edge straight, well-defined, posterior suffused and indistinct, extended as a cloudy patch across tornus; costal patch slightly indicated by faint ferruginous-ochreous and greyish suffusion, and in one specimen whole posterior area beyond central fascia, suffusedly sprinkled with ferruginous-ochreous; a cloudy spot of grey irroration on middle of termen: cilia light grey, with darker subbasal shade. Hindwings and cilia whitish.

♀. 26 mm. Head and palpi light grey. Thorax light brownish-ochreous. Forewings more elongate than in ♂, brownish-ochreous slightly tinged with reddish; costal edge slenderly suffused with grey, extreme edge white; dorsum and termen rather broadly suffused with light grey; central fascia hardly darker except towards dorsum, where it is suffused with dark grey irroration: cilia grey. Hindwings whitish, faintly tinged with grey towards lower part of termen; cilia whitish.

Vic.: Mount St. Bernard, 5000 feet(Lyell); in February, three specimens.

181. *T. firmata*, n.sp.

♂. 21 mm. Head and thorax whitish-ochreous, patagia ochreous-brownish. Palpi whitish-ochreous sprinkled with fuscous. Antennal ciliations 1. Abdomen light grey. Forewings elongate, posteriorly dilated, costa anteriorly gently, posteriorly slightly arched, without fold, apex obtuse, termen slightly rounded, rather oblique; whitish-ochreous, strigulated with pale ochreous mixed with fuscous; basal patch small, ochreous-brownish, dotted with dark fuscous on costa, outer edge marked with dark fuscous, angulated in middle; central fascia rather broad, very oblique, rather dark fuscous, slightly narrowed towards costa, above tornus sending out a streak of fuscous suffusion near and parallel to lower half of termen; costal patch moderate, semioval, rather dark fuscous, with one or two pale strigulae on costa in middle: cilia whitish-ochreous, on basal half with traces of slight brownish bars near apex. Hindwings pale grey, towards apex whitish-tinged and somewhat darker-strigulated; cilia white.

Vic.: Birchip(Goudie); in September; one specimen. Type in Coll. Goudie.

182. *T. stigmatias*, n.sp.

♂. 17-20 mm. Head and thorax pale fuscous, sometimes tinged with reddish. Palpi pale fuscous, more or less sprinkled with blackish. Antennal ciliations  $\frac{3}{4}$ . Abdomen pale greyish-ochreous sprinkled with grey. Forewings elongate-triangular, costa gently arched, costal fold very slight and rudimentary, reaching to about middle, without dilation of scales, apex obtuse, termen faintly sinuate, hardly oblique; whitish-fuscous or light fuscous, more or less mixed with light brown-reddish, often with scattered small dark fuscous strigulae, especially on margins and posteriorly; central fascia oblique, on upper  $\frac{2}{3}$  narrow, brownish, edged with black and terminated beneath by a small blackish spot, usually interrupted beneath this, lower portion very indefinite, represented by a cloudy fuscous suffusion extending across tornus to lower half of termen and edged anteriorly by a

more or less indicated convex pale whitish-ochreous suffusion sometimes tinged with reddish: cilia whitish-fuscous, becoming ochreous-whitish towards tips, often more or less suffused with pale ferruginous. Hindwings grey-whitish, spotted with light grey; cilia grey-whitish, with grey subbasal shade.

Tas.: Deloraine—Vic.: Mount St. Bernard, 5000 feet (Lyell); in November, December, and February; nine specimens.

183. *T. psarodes*, n.sp.

♂♀. 23-26 mm. Head, palpi, and thorax whitish-fuscous more or less mixed with brownish and sometimes partially with ferruginous. Antennal ciliations in ♂ 1. Abdomen fuscous-whitish sprinkled with brown. Forewings suboblong, posteriorly dilated, costa towards base moderately, then hardly arched, in ♂ without fold, apex obtuse, termen sinuate, little oblique; brownish, slightly tinged with ferruginous, sometimes irrorated with fuscous, sometimes strigulated throughout with dark fuscous, in one ♂ slightly and in ♀ considerably whitish-mixed between strigulae: central fascia on upper half narrow, irregular, fuscous or only indicated by some blackish edging, on lower half wholly obsolete: cilia ochreous-whitish, with subbasal ferruginous line dotted with blackish, in Brisbane specimens suffused with ochreous-brownish. Hindwings grey-whitish or whitish-grey, strigulated with grey; cilia whitish or grey-whitish, with grey subbasal line.

Q.: Brisbane (Turner)—Vic.: Gisborne (Lyell), Sale (Miss M. Wise); a winter species, from June to August; four specimens.

184. *T. laganodes*, n.sp.

♀. 21-22 mm. Head light greyish-ochreous partially suffused with grey. Palpi pale greyish-ochreous irrorated with grey. Thorax reddish-fuscous more or less mixed with grey. Abdomen whitish-ochreous mixed with dark grey. Forewings suboblong, somewhat dilated posteriorly, costa anteriorly moderately arched, posteriorly straight, apex obtuse, termen sinuate, somewhat oblique; reddish-fuscous, strigulated with dark grey, with transverse series of deep red-brown strigulae; markings formed by dark

grey suffusion; central fascia moderate, oblique, sometimes narrowed towards costa, towards dorsum ill-marked or obsolete; costal patch moderate, semioval at about  $\frac{2}{3}$ ; more or less dark suffusion towards termen: cilia reddish-fuscous, more or less mixed with dark grey, extreme tips ochreous-whitish on termen. Hindwings grey, darker-strigulated; cilia ochreous-grey-whitish, with two grey shades.

Vic.: Gisborne, Beaconsfield(Lyell); in February and March, two specimens. Type in Coll. Lyell.

185. *T. piperata*, n.sp.

♂. 17 mm. Head and thorax fuscous. Palpi brownish, beneath suffused with dark fuscous. Antennal ciliations  $\frac{1}{2}$ . (Abdomen broken.) Forewings elongate, posteriorly dilated, costa gently arched, without fold, apex obtuse, termen slightly rounded, rather oblique; light fuscous, with small scattered ferruginous-brown strigulae, some on costa marked with black; a narrow irregular oblique ferruginous-brown streak marked with black from  $\frac{2}{5}$  of costa to above middle of disc, and a small similar spot beneath costa before  $\frac{3}{4}$ : cilia light fuscous. Hindwings bluish-hyaline, strewn with black specks; veins and a moderate terminal fascia grey; cilia light grey, with interrupted dark grey subbasal shade.

Q.: Brisbane(Turner); one specimen.

186. *T. ferrea*, n.sp.

♂. 18-20 mm. Head, palpi, and thorax varying from light to rather dark fuscous. Antennae with moderate ciliations(1) at apex of joints only. Abdomen grey. Forewings elongate, posteriorly dilated, costa gently arched, without fold, apex obtuse, termen nearly straight, rather oblique; light greyish-ochreous to brownish, strigulated throughout with fuscous or dark fuscous, these strigulae almost obsolete in the darkest specimen but very strong and numerous in the lightest; an oblique fuscous streak from costa at  $\frac{2}{5}$  to above middle of disc, dilated beneath, sometimes obsolete; costal patch rather small, triangular,

fuscous, indistinct or obsolete : cilia concolorous, outer half sometimes suffused with whitish. Hindwings grey, with traces of darker strigulæ; cilia light grey, with darker subbasal shade.

Vic.: Birchip(Goudie); in April, three specimens.

187. *T. pyrosemana* Meyr.

(*Cacæcia pyrosemana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 496.)

♂. 18-23 mm. Head, palpi, and thorax light fuscous sprinkled with darker. Antennal ciliations  $1\frac{1}{2}$ , at apex of joints. Abdomen grey. Forewings elongate, posteriorly dilated, costa anteriorly moderately, posteriorly slightly arched, without fold, apex obtuse, termen sinuate, somewhat oblique; ochreous-grey, strewn with very indistinct darker strigulæ; costa and dorsum shortly strigulated with dark fuscous; upper half of central fascia darker, ill-marked, oblique, terminated abruptly and somewhat black-marked beneath; costal patch hardly indicated : cilia ochreous-grey. Hindwings grey, faintly darker-strigulated; cilia light grey, with somewhat darker subbasal line.

N.S.W.: Sydney—Vic.: Wandin(Jarvis), Macedon, Gisborne (Lyell), Melbourne—S. Aust.: Mount Lofty; in November, February, May, and June. Described originally from the ♀ only, which sex is much more distinctly marked; the ♂ is very similar to *T. ferrea*, from which it appears to be truly distinct by the longer antennal ciliations, and sinuate termen of forewings.

188. *T. lythrodana* Meyr.

(*Cacæcia lythrodana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 497.)

N.S.W.: Blackheath, (3500 feet)—Vic.: Mount St. Bernard (5000 feet), Gisborne, Beaconsfield, Lorne(Lyell), Melbourne—Tas.: Mount Wellington—S. Aust.: Mount Lofty; from December to March.

189. *T. oriarcha*, n.sp.

♂. 20 mm. Head white. Palpi white, second joint externally dark fuscous except towards apex. Antennal ciliations 1.

Thorax white, shoulders and a posterior spot dark fuscous. Abdomen light grey, anal tuft suffused with whitish. Forewings suboblong, costa anteriorly moderately, posteriorly slightly arched, costal fold very slight and narrow, reaching  $\frac{2}{5}$ , with triangular dilation of scales at  $\frac{1}{5}$ , apex obtuse, termen straight, rather oblique; dull white; markings dark fuscous; costal fold dark fuscous; a triangular blotch on base of dorsum, reaching  $\frac{2}{3}$  across wing; a straight oblique narrow fascia representing edge of basal patch, almost or quite interrupted near dorsum; central fascia nearly straight, narrow, oblique, posterior edge in middle with a narrow projection; a small spot on dorsum before tornus, and a large triangular spot above this, anteriorly connected with central fascia; a triangular blotch towards apex, its upper side connected with costa by three bars, of which first is sometimes prolonged almost to touch projection of central fascia, its lower angle resting on termen above tornus; some dark fuscous scales along termen: cilia white, on basal half with some narrow dark fuscous bars. Hindwings grey; cilia whitish, with indistinct grey subbasal shade.

VIC.: Mount St. Bernard, 5000 feet (Lyell); in February, amongst "Snow-gums" on the ridges. Type in Coll. Lyell.

190. *T. desmotana* Meyr.

(*Cacæcia desmotana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 506.)

N.S.W.: Lawson (Lyell), Blackheath (3500 feet), Mount Kosciusko (4000 feet); from January to April.

191. *T. amænana* Walk.

(*Conchylis amænana* Walk., Cat. xxviii., 366; *C. semirectana* ib. xxx., 987; *C. galbana* Feld., Reis. Nov. pl. cxi., 29; *Tortrix amænana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 510.)

Hindwings sometimes suffused with dark fuscous (Gisborne form).

N.S.W.: Sydney, Blackheath (3500 feet), Mount Kosciusko (3500 feet)—VIC.: Mount St. Bernard (5000 feet), Gisborne

(Lyell)—S. AUST.: Victor Harbour (Guest); from November to March. Larva amongst spun shoots of *Monotoca scoparia*, usually three or four together in a good deal of dense web.

192. *T. subfurcatana* Walk.

(*Conchylis subfurcatana* Walk., Cat. xxviii., 368; *Tortrix subfurcatana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 511.)

N.S.W.: Moruya (Lyell), Richmond River, Sydney, Bulli, Bathurst, Mittagong, Mount Kosciusko (4300 feet)—VIC.: Gisborne (Lyell), Melbourne, Healesville—TASM.: Launceston, Deloraine, George's Bay, Hobart—S. AUST.: Mount Graham, Mount Lofty; from September to March.

193. *T. paurozona* Low.

(*Tortrix paurozona* Low., Trans. Roy. Soc. S. Austr. 1902, 252.)

♂. 19 mm. Head, palpi, and thorax brownish mixed with whitish. Antennal ciliations  $1\frac{1}{2}$ . Forewings elongate, costa slightly arched, without fold, apex obtuse, termen straight, oblique; light brown; markings ochreous-whitish; a curved transverse streak from costa about  $\frac{1}{5}$ , reaching more than half across wing; a small costal mark before  $\frac{2}{5}$ ; a slender oblique fascia from dorsum at  $\frac{2}{5}$ , reaching  $\frac{2}{3}$  across wing; slender irregular streaks from dorsum at  $\frac{3}{5}$  and  $\frac{4}{5}$  meeting in disc beyond middle; three or four dots on posterior half of costa; a slender sinuate streak from beneath costa at  $\frac{4}{5}$  to tornus; a subtriangular spot near termen beneath apex; a dot at apex, and one on termen beneath middle. Hindwings dark fuscous suffusedly spotted with light brownish; on under surface these spots are suffused with whitish, and confluent in transverse series.

S. AUST.: Blackwood (Lower); in November (according to label, not October as stated by Lower). Described from type.

194. *T. aphrotis*, n.sp.

♂♀. 16-20 mm. Head white. Palpi white, tinged with grey externally. Antennal ciliations of ♂ 1. Thorax white irrorated with grey. Abdomen whitish-fuscous. Forewings suboblong,



costa anteriorly gently, posteriorly hardly arched, costal fold in ♂ narrow, reaching  $\frac{2}{5}$ , triangularly dilated with scales towards its middle, apex obtuse, termen nearly straight, rather oblique; pale greyish-ochreous, sometimes very finely speckled with dark fuscous, more or less suffusedly mixed with white, especially towards costa, which is sometimes wholly suffused with white; sometimes obscure grey or fuscous markings, consisting of some indefinite spots indicating basal patch, an oblique streak from costa before middle, becoming broader and continued longitudinally above middle to near termen, three or four small spots on posterior half of costa, and a blotch above tornus, but these are generally wholly obsolete (only represented in two specimens): cilia white, basal half more or less tinged with grey and finely speckled with dark fuscous. Hindwings light fuscous, becoming paler and whitish-tinged anteriorly; cilia white, sometimes with more or less indicated fuscous subbasal line.

W. AUSTR.: Carnarvon, Geraldton; in October and November, twelve specimens. Larva cylindrical, grey-whitish, greenish-tinged; dorsal slender, greyer; sometimes other lines faintly indicated; spots white; head marbled with brownish, or brown spotted with dark brown: feeds in spun-together shoots of a maritime shrub with grey-whitish leaves, not found in flower and therefore not identified, in October.

195. *T. paralia*, n.sp.

♂♀. 17-21 mm. Head whitish, sides of crown sometimes grey. Palpi grey, above and at base whitish. Antennal ciliations of ♂ 1. Thorax grey, sometimes mixed with white, posterior margin white. Abdomen whitish-ochreous. Forewings suboblong, costa anteriorly gently, posteriorly slightly arched, costal fold in ♂ narrow, reaching  $\frac{2}{5}$ , triangularly dilated with scales towards its middle, apex obtuse, termen straight, rather oblique; white, sometimes somewhat sprinkled with ochreous-grey or brownish towards dorsum and termen, seldom (in two specimens) suffused with brownish on dorsal half and towards termen; costal fold sometimes partially or wholly fuscous; markings yellow-ochreous,

sometimes mixed or partially suffused with fuscous or dark fuscous; basal patch more or less indicated by suffusion in disc and often an angulated series of three or four spots representing outer edge; an oblique streak from costa at  $\frac{2}{5}$ , angulated and continued above middle of disc to near termen, costal extremity and posterior portion sometimes obsolete; an irregular spot beneath angle of this, another above tornus, and a third towards dorsum between these, varying much in development, sometimes combined into a triangular blotch, sometimes partially or wholly obsolete, sometimes partially connected with longitudinal streak above it; five small spots on posterior half of costa, often wholly obsolete; sometimes a slender irregular streak along termen: cilia white, with a more or less developed interrupted dark fuscous subbasal line, sometimes wholly obsolete. Hindwings light fuscous, paler and whitish-tinged towards base; cilia white, sometimes with light fuscous subbasal line.

S. AUST.: Wallaroo, Port Lincoln; in November, eleven specimens. Somewhat broader-winged than *T. aphrotis*; ordinary forms of the two species are distinct enough, but some varieties approximate. Larva cylindrical, rather light green; dorsal and subdorsal narrow, dark green, conspicuous; head and second segment greenish-ochreous; feeds in spun-up shoots of *Aster axillaris*, in October and November.

196. *T. hydractis*, n.sp.

♂. 19 mm. Head, palpi, thorax, and abdomen rather dark fuscous, palpi whitish towards base beneath, apex of patagia white. Antennal ciliations 1. Forewings elongate, rather dilated posteriorly, costa gently arched, fold slight, narrow, reaching  $\frac{2}{5}$ , with triangular dilation of scales at  $\frac{1}{5}$ , apex obtuse, termen somewhat rounded, oblique; white; markings dark fuscous suffusedly mixed with brownish-ochreous; extreme base dark fuscous; two moderate fasciæ representing basal patch, outer angulated in middle; a transverse blotch on dorsum beyond this; a moderate oblique irregular-edged fascia from  $\frac{2}{5}$  of costa to  $\frac{2}{3}$  of dorsum; a small spot on costa and two or three irregular dots in

disc beyond this; an irregular fascia from  $\frac{2}{3}$  of costa to tornus, including a white dot on costa, connected posteriorly with a rounded blotch above middle; two small spots on costa before apex; an irregular streak along termen: cilia fuscous, basal half white barred with dark fuscous. Hindwings rather dark grey; cilia grey, with darker subbasal shade.

N.S.W.: Mount Kosciusko, 6000 feet; in January, one specimen.

197. *T. technitis*, n.sp.

♂♀. 22-24 mm. Head and thorax whitish more or less tinged or mixed with fuscous, shoulders and patagia except apex dark fuscous. Palpi dark fuscous, whitish above and towards base beneath. Antennal ciliations of ♂  $\frac{3}{4}$ . Abdomen grey. Forewings suboblong, costa anteriorly moderately, posteriorly slightly arched, costal fold in ♂ slight, narrow, reaching  $\frac{2}{5}$ , with triangular dilation of scales at  $\frac{1}{5}$ , apex obtuse, termen almost straight, rather oblique; white; markings dark fuscous; costal fold dark fuscous; a median longitudinal streak from base, terminated in an oblique streak running from  $\frac{1}{4}$  of costa to beneath middle of disc, sometimes interrupted posteriorly; a subdorsal streak from base to beyond  $\frac{1}{3}$ ; a small dorsal spot beyond its apex, and some scattered fuscous scales round this; an oblique streak from  $\frac{2}{5}$  of costa to middle of disc, where it forms an angle often coalescing with apex of preceding streak from costa, and is continued above middle to near apex, posteriorly enlarged and forming a more or less marked projection downwards, and above coalescing more or less completely with three small inwardly oblique spots on posterior part of costa; a semioval spot on costa beyond middle; an oblique streak from  $\frac{2}{3}$  of dorsum to disc at  $\frac{2}{5}$ , thence angulated to tornus, variable and irregular in outline; a slender irregular streak along upper part of termen: cilia white, basal half suffusedly barred with dark fuscous, beneath apex and at tornus with grey patches. Hindwings grey, darker posteriorly; cilia grey-whitish, with grey subbasal shade.

N.S.W.: Bathurst(Stephenson)—Vic.: Lorne(Lyell); in March, ten specimens.

198. *T. calaractis*, n.sp.

♂. 20 mm. Head whitish, upper half of face fuscous. Palpi dark fuscous, whitish towards base beneath. Antennal ciliations  $\frac{3}{4}$ . Thorax fuscous, posteriorly whitish. Abdomen whitish-fuscous, with iridescent-silvery bands on margins of segments, anal tuft ochreous-whitish. Forewings suboblong, costa anteriorly moderately, posteriorly slightly arched, costal fold narrow, reaching  $\frac{2}{5}$ , with triangular dilation of scales about its middle, apex obtuse, termen slightly sinuate, somewhat oblique; ochreous-whitish, with some scattered fuscous scales in disc; costal fold dark fuscous; a fuscous streak mixed with dark fuscous from base above middle to  $\frac{2}{5}$ , triangularly dilated posteriorly; a fuscous band occupying dorsal third throughout and continued along termen to apex, where it is terminated by a strong dark fuscous streak rising from costa at  $\frac{2}{5}$ , running obliquely to middle of disc, and thence angulated to apex; some dark fuscous scales scattered along upper margin of dorsal band, and a triangular dark fuscous spot resting on it above tornus: cilia whitish suffusedly mixed with fuscous (imperfect). Hindwings grey; cilia whitish, with grey subbasal shade.

Vic.: Mount St. Bernard, 5000 feet (Lyell); in February, one specimen. Type in Coll. Lyell.

199. *T. tessulatana* Meyr.

(*Cacocia tessulatana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 506.)

Vic.: Melbourne (Raynor). Still unique.

200. *T. serrata*, n.sp.

♀. 22 mm. Head whitish. Palpi fuscous, above and beneath whitish. Thorax fuscous, posterior edge white. Abdomen pale whitish-ochreous tinged with grey. Forewings suboblong, costa anteriorly gently, posteriorly slightly arched, apex obtuse, termen slightly rounded, rather oblique; rather light fuscous, somewhat sprinkled with whitish and dark fuscous; a rather broad white costal streak from base to  $\frac{5}{6}$ , narrowed posteriorly,

cut by two narrow angulated dark fuscous fasciæ representing basal patch but not reaching dorsum, and an oblique dark fuscous bar at  $\frac{2}{5}$ , and beyond this enclosing four triangular dark fuscous costal spots; a transverse dark fuscous mark in middle of disc, and a small dark fuscous spot on middle of dorsum; an irregular dark fuscous blotch above tornus, its upper angle preceded by a white dot: cilia whitish mixed with fuscous (imperfect). Hindwings fuscous, lighter anteriorly; cilia whitish with two fuscous shades.

Vic.: Nhill (Lyell); in June, one specimen. Type in Coll. Lyell.

201. *T. agrypna*, n.sp.

♂. 19-20 mm. Head, palpi, thorax, and abdomen light fuscous. Antennal ciliations  $\frac{3}{2}$ . Forewings suboblong, costa anteriorly moderately, posteriorly slightly arched, costal fold narrow, reaching middle, with triangular dilation of scales at  $\frac{1}{5}$ , apex obtuse, termen hardly sinuate, oblique; light fuscous more or less sprinkled with ferruginous and whitish; basal patch indicated by some irregular blackish-fuscous irroration, and a blackish-fuscous mark in disc representing its angle; central fascia on upper half fuscous irrorated with blackish, moderate, oblique, preceded and followed by more or less whitish suffusion towards costa, on lower half hardly indicated except by some blackish irroration towards dorsum before tornus; a small darker spot on costa before  $\frac{3}{5}$ ; two or three transverse series of small blackish strigulæ in posterior part of wing: cilia pale whitish-ochreous, with a more or less marked brownish subbasal line. Hindwings light fuscous; cilia as in forewings.

VICTORIA: without further record; three specimens.

202. *T. eugramma* Low.

(*Tortrix eugramma* Low., Proc. Linn. Soc. N. S. Wales, 1899, 91.)

♂. 17-18 mm. Head and thorax fuscous mixed with whitish. Antennal ciliations  $1\frac{1}{4}$ . Forewings suboblong, costa anteriorly gently arched, posteriorly straight, without fold, apex obtuse,

termen slightly rounded, rather oblique; fuscous mixed with dark fuscous, and sometimes partially with whitish; a moderately broad whitish band, partially tinged or sometimes much suffused with light fuscous, rising obliquely from costa at  $\frac{1}{4}$ , narrower here, anterior edge forming an acute angular projection in disc, angulated below middle and running to apex, lower edge concave beyond angulation; a whitish mark immediately beneath costa in middle, sometimes obsolete. Hindwings grey, indistinctly darker-strigulated.

VIC.: Sale (Miss M. Wise); from November to January. Re-described from type and two other specimens, all from Sale; I think Lower's record of Brighton may be an error based on *T. lathraea*.

203. *T. lathraea*, n.sp.

♂. 15-17 mm. Head, palpi, and thorax whitish-ochreous or greyish-ochreous, more or less sprinkled with dark fuscous. Abdomen greyish. Antennal ciliations 1. Forewings elongate, costa anteriorly gently arched, posteriorly nearly straight, without fold, apex obtuse, termen slightly rounded, oblique; whitish, partially tinged with pale ochreous-yellowish, on dorsal half and posteriorly more or less irrorated with light grey or dark fuscous; markings fuscous irrorated with dark fuscous, sometimes mixed with ferruginous or light yellowish; a moderate basal patch, outer edge angulated in middle; a flattened-triangular blotch extending along costa from  $\frac{1}{4}$  almost to apex, often containing an oblique whitish spot on middle of costa indicating the division between central fascia and costal patch; a blotch extending over tornus and termen, its edge running from  $\frac{2}{3}$  of dorsum to apex, triangularly prominent below middle: cilia pale greyish-ochreous or whitish-ochreous with brownish shade, often speckled with fuscous or dark fuscous. Hindwings grey, darker posteriorly, sometimes faintly strigulated with darker; cilia grey-whitish or pale greyish, with grey subbasal shade.

VIC.: Melbourne—TASM.: Deloraine; in November and December, eleven specimens.

204. *T. echinitis*, n.sp.

♂♀. 17-20 mm. Head and palpi pale brownish-ochreous, palpi whitish towards base beneath. Antennal ciliations of ♂  $1\frac{1}{2}$ . Thorax brownish-ochreous. Abdomen pale grey. Forewings elongate, costa gently arched, in ♂ without fold, apex obtuse, termen very faintly sinuate, oblique; brownish-ochreous mixed with light red-brownish, upper half of wing suffusedly mixed with whitish except on margins; markings ochreous-fuscous sprinkled with blackish-grey; an undefined patch in disc towards base, extended by grey suffusion almost to central fascia; central fascia narrow, sinuate, very oblique, not quite reaching tornus, edged anteriorly with whitish suffusion, sending a thicker branch from above middle gradually diminishing to costa before apex; from lower side of this branch near origin rises a streak, at first very narrow and running obliquely downwards, then thicker and bent up to termen beneath apex: cilia ochreous-whitish, basal third pale ochreous more or less spotted with pale red-brownish and dark grey. Hindwings light grey, faintly darker-spotted towards apex; cilia ochreous-whitish, with fine grey subbasal line.

S. AUST.: Port Lincoln; in November, two specimens.

205. *T. aulacana* Meyr.

(*Tortrix aulacana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 513; *T. asthenopis* Low., Trans. Roy. Soc. S. Austr. 1902, 252.)

N.S.W.: Sydney—VIC.: Melbourne (Lower), Beaconsfield (Lyell), Healesville, Mount Macedon—TASM.: Deloraine—S. AUST.: Mount Lofty; from September to December, and in May. A variety occurs in which the markings are nearly obliterated by a general suffusion of the groundcolour.

206. *T. epichorda*, n.sp.

♂. 17 mm. Head and thorax light grey, crown sometimes whitish-tinged. Palpi ochreous-fuscous, whitish above. Antennal ciliations  $1\frac{1}{2}$ . Abdomen grey, apex whitish. Forewings elongate, costa moderately arched, without fold, apex obtuse-pointed,

termen very faintly sinuate, oblique; light fuscous largely suffused with whitish, with some scattered dark fuscous scales, tending to indicate transverse series of dots; costal edge dark fuscous towards base; a narrow somewhat <sup>u</sup>upcurved fuscous streak, mixed with dark fuscous and tinged with ochreous, above middle from base to apex; a little-marked oblique bar of dark fuscous irroration from costa to this streak, indicating central fascia; a very small dark fuscous spot on dorsum at  $\frac{1}{3}$ ; a rhomboidal blotch of fuscous suffusion and dark fuscous irroration on tornus, extending over posterior third of dorsum and lower  $\frac{2}{3}$  of termen: cilia pale whitish-ochreous, at apex with a fuscous bar, and at tornus with a small dark fuscous basal spot. Hindwings grey, posteriorly darker spotted; cilia whitish, with grey subbasal shade.

VICTORIA: without further record; two specimens.

207. *T. eucela*, n.sp.

♂♀. 18 mm. Head, palpi, and thorax fuscous mixed with yellow-whitish, palpi rather long. Antennal ciliations of ♂ 1. Abdomen light grey. Forewings elongate, costa gently arched, in ♂ without fold, apex obtuse, termen obliquely rounded; fuscous, closely strewn throughout with yellow-grey-whitish scales, and sprinkled with blackish specks: cilia yellow-whitish, basal third light fuscous edged by a line of blackish irroration. Hindwings light grey; cilia grey-whitish, with grey basal shade.

TASM.: Mount Wellington, 3100 feet; in December, two specimens.

208. *T. telephanta*, n.sp.

♂. 18-19 mm. Head, palpi, and thorax fuscous. Antennal ciliations  $1\frac{1}{4}$ . Abdomen grey, anal tuft light greyish-ochreous. Forewings elongate, costa gently arched, without fold, apex obtuse, termen almost straight, oblique; fuscous-grey, strewn with whitish scales, sometimes with small scattered blackish strigulae; markings darker, without whitish admixture, edges more or less marked with scattered blackish strigulae sometimes accompanied with some light brownish-ochreous scales; basal



patch with outer edge ill-defined, irregular, very oblique; central fascia moderate, irregular, very oblique, dilated on tornus; costal patch flattened-triangular, extending from beyond middle to near apex; an irregular blotch towards middle of termen, sometimes suffusedly confluent with one or other of preceding: cilia light fuscous, with darker basal shade. Hindwings rather light fuscous; cilia whitish-fuscous.

TASM.: Mount Wellington, 4100 feet; in December, three specimens.

209. *T. tasmaniana* Walk.

(*Conchylis tasmaniana* Walk., Cat. xxviii., 365; *Dipterina tasmaniana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 524.)

VIC.: Gisborne, Beaconsfield (Lyell), Melbourne (Raynor)—S. AUSTR.: Mount Lofty (Guest)—TASM. (Walker)—W. AUSTR.: Geraldton, York, Perth, Albany; from September to November, and January to March.

210. *T. nephaula*, n.sp.

♂. 13-15 mm. Head, palpi, thorax, and abdomen fuscous, palpi white beneath. Antennal ciliations  $\frac{2}{3}$ . Forewings elongate, slightly dilated posteriorly, costa gently arched, without fold, apex obtuse, termen almost straight, rather oblique; fuscous-grey, more or less sprinkled or mixed with whitish, especially towards costa, and variably strewn with strigulæ of black and reddish-brown scales; markings very indistinctly indicated, hardly darker, without whitish mixture; basal patch hardly defined, outer edge angulated in middle; central fascia moderate, oblique, only distinct towards costa: cilia pale grey, sometimes obscurely barred or partially suffused with whitish, with a dark grey sub-basal shade sometimes with some black and red-brownish scales. Hindwings fuscous, darker towards apex; cilia light grey with darker subbasal shade, tips whitish-suffused.

TASM.: Mount Wellington, 3000 feet; in December, four specimens.

211. *T. isochroa*, n.sp.

♂. 17-19 mm. Head and thorax greyish, sometimes suffusedly spotted with ferruginous. Palpi greyish. Antennal ciliations  $1\frac{1}{4}$ . Abdomen whitish-ochreous tinged with grey. Forewings suboblong, costa anteriorly moderately, posteriorly slightly arched, without fold, apex obtuse, termen slightly rounded, oblique; light fuscous suffusedly irrorated with white; markings formed by ferruginous irroration or suffusion, ill-defined and variable in development; basal patch very indefinite or almost obsolete; central fascia oblique, well-marked and rather narrow on upper half, sometimes marked with blackish irroration, on lower half considerably dilated posteriorly but sometimes little marked; a more or less marked triangular apical patch, extending to  $\frac{2}{5}$  of costa and middle of termen: cilia whitish, with grey subbasal line. Hindwings pale whitish-grey; cilia whitish, with faint greyish subbasal line.

W. AUST.: Waroona (Berthoud), York; in September and October, two specimens.

212. *T. liquidana* Meyr.

(*Cacecia liquidana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 505.)

Variable, with tendency to localisation of colour-varieties; forewings sometimes partially tinged or wholly suffused with ferruginous-ochreous; this suffusion begins towards dorsum and spreads more or less over whole wing; sometimes in ♀ the veins are indicated by lines of blackish specks. From Bathurst and Albany I have seen only the form with ferruginous-ochreous suffusion; at Gisborne and in Tasmania the grey and ochreous forms occur together, with intermediate varieties.

Q.: Stradbroke Island (Turner)—N.S.W.: Sydney (Lyell), Bathurst, Blackheath (3500 feet), Mount Kosciusko (4700 feet)—VIC.: Gisborne (Lyell), Melbourne—TAS.: Launceston, George's Bay, Mount Wellington—S. AUST.: Mount Lofty, Wirrabara, Port Lincoln—W. AUST.: Albany; from October to April.

213. *T. indigestana* Meyr.

(*Tortrix indigestana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 520.)

Vein 7 of forewings in ♂ sometimes runs to termen, but usually to apex, a somewhat unusual form of variation. A specimen in Mr. Lyell's collection has vein 4 of forewings absent on one side, though present as usual on the other.

N.S.W.: Sydney—VIC.: Gisborne(Lyell), Kewell(Hill)—TAS.: Hobart(Norman), George's Bay—S. AUSTR.: Port Lincoln—W. AUSTR.: Albany; from August to January. Also in New Zealand, but perhaps accidentally introduced. Larva amongst spun shoots and leaves of *Hibbertia linearis*, perhaps also other plants.

214. *T. haplodes*, n.sp.

♂. 14-16 mm. Head, palpi, thorax, and abdomen grey-whitish irrorated with grey. Antennal ciliations 1. Forewings sub-oblong, costa anteriorly moderately, posteriorly slightly arched, costal fold slight and very narrow, reaching about  $\frac{2}{5}$ , with triangular dilation of scales before  $\frac{1}{3}$ , apex obtuse, termen rounded, rather oblique; pale greyish-ochreous, tinged with whitish and faintly strigulated with greyish; central fascia darker, undefined, moderately broad, oblique, rather narrowed towards costa: cilia pale whitish-ochreous. Hindwings light grey; cilia ochreous-whitish, with faint greyish subbasal shade.

N.S.W.: Sydney; in November, two specimens.

215. *T. concordana* Meyr.

(*Tortrix concordana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 519.)

Q.: Stradbroke Island (Turner)—N.S.W.: Sydney, Blackheath (3500 feet), Bathurst—VIC.: Melbourne—S. AUSTR.: Mount Lofty (Guest); from July to November, and in March. Larva in spun shoots and amongst cylindrically joined leaves of *Hibbertia linearis* and *H. fasciculata*.

216. *T. standishana* Newm.

(*Tortrix standishana* Newm., Trans. Ent. Soc. Lond. iii.(n.s.), 286; Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 522.)

Q.: Duaringa (Barnard), Brisbane (Turner)—N.S.W.: Glen Innes (3500 feet), Blackheath (3500 feet), Sydney—S. AUSTR.: Mount Gambier, Mount Lofty—W. AUSTR.: Geraldton; from August to December, and in March.

217. *T. concolorana* Meyr.

(*Tortrix concolorana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 522.)

N.S.W.: Sydney—VIC.: Birchip (Gondie)—TASM.: George's Bay, Hobart; from September to January.

218. *T. scandalota*, n.sp.

♂. 17-18 mm. Head, palpi, and thorax yellow-ochreous. Antennal ciliations 1. Abdomen whitish-ochreous, dorsally suffused with grey. Forewings rather elongate, posteriorly considerably dilated, costa anteriorly moderately, posteriorly slightly arched, without fold, apex obtuse, termen almost straight, rather oblique; whitish-ochreous, with silvery reflections; markings yellow-ochreous marked with blackish on costa; basal patch more or less marked, outer edge somewhat bent and marked with a few dark grey scales in middle; one or two irregular striæ between this and central fascia; central fascia very narrow, rather oblique, marked with several very small grey spots; a stria from  $\frac{2}{3}$  of costa to before tornus, marked with a few dark grey scales in middle; three more or less confluent striæ from costa posteriorly: cilia whitish-ochreous. Hindwings light grey; cilia ochreous-whitish, with light grey subbasal line.

VIC.: Mount St. Bernard, 5000 feet (Lyell); in February, two specimens.

219. *T. immersana* Walk.

(*Pædisca immersana* Walk., Cat. xxviii., 380; *Tortrix trygodana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 515, 535.)

N.S.W.: Sydney—VIC.: Sale—W. AUST.: Waroona(Berthoud); in September and October.

220. *T. divulsana* Walk.

(*Conchylis divulsana* Walk., Cat. xxviii., 364; *Tortrix glaphyrana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 516.)

Q.: Duaringa (Barnard), Brisbane, Stanthorpe, Warwick (Turner), Toowoomba—N.S.W.: Katoomba(Lyell), Newcastle, Sydney, Bathurst, Shoalhaven, Cooma—VIC.: Gisborne(Lyell), Castlemaine(Drake), Wandin(Jarvis), Melbourne—TASM.: Deloraine, Hobart—S. AUST.: Mount Gambier(Guest), Mount Lofty, Port Lincoln—W. AUST.: Bridgetown (Berthoud), Geraldton, Perth, Albany; from October to April. Larva feeds on lucerne and is an injurious pest(Lyell); probably also on allied plants.

30. MERITASTIS, n.g.

Antennæ in ♂ moderately ciliated. Palpi rather short, slender, ascending, with appressed scales, terminal joint short. Thorax without crest. Forewings with 3 from angle, 7 separate, to termen. Hindwings with 3, 4, 5 approximated at base, 6 and 7 closely approximated towards base.

Apparently a modification of *Epichorista*.

221. *M. umbrosa*, n.sp.

♂. 17-18 mm. Head, palpi, thorax, and abdomen dark grey, shoulders sometimes mixed with ferruginous-brown. Antennal ciliations 1. Forewings suboblong, costa anteriorly gently, posteriorly slightly arched, without fold, apex obtuse, termen almost straight, rather oblique; rather dark grey; about nine irregular indistinct partially interrupted darker striæ mixed with black and ferruginous-brown scales: cilia ochreous-whitish tinged with brownish, basal half grey mixed with ferruginous-brownish. Hindwings rather dark grey; cilia light grey, with darker sub-basal shade. Hindwings beneath suffused with grey-whitish and strigulated with dark grey.

VIC.: Macedon(Lyell); in November, two specimens.

## 31. EPICHORISTA Meyr.

Antennæ in ♂ ciliated. Palpi moderate, porrected, second joint with rough projecting scales above and beneath, terminal joint short. Thorax without crest. Forewings with 3 from angle, 7 and 8 separate, 7 to termen. Hindwings with 3 and 4 approximated at base, 5 rather approximated to 4, 6 and 7 closely approximated towards base or stalked.

I have characterised this genus in the Annals of the Transvaal Museum, and also in the Transactions of the New Zealand Institute for the current year, but as neither is yet published, I cannot give exact reference. The genus contains seven described species from New Zealand, and several from South Africa, but is not known elsewhere.

222. *E. serena*, n.sp.

♂. 16-17 mm. Head and thorax light yellow-ochreous. Palpi yellowish-ochreous, externally tinged with fuscous towards middle. Antennæ dark grey, ciliations nearly 3. Abdomen grey. Forewings elongate, posteriorly dilated, costa gently arched, without fold, apex obtuse, termen almost straight, oblique; ochreous-yellowish or pale yellowish, slightly sprinkled with grey; costa and dorsum usually shortly strigulated with dark fuscous irroration; numerous irregular cloudy pale silvery-grey or silvery grey-whitish striæ or series of small spots; basal patch and extremities of central fascia sometimes indicated by grey suffusion: cilia ochreous-yellowish or pale yellowish, paler towards tips, at apex with a greyish spot. Hindwings with 6 and 7 stalked; grey; cilia whitish-grey, with grey subbasal line.

TASM.: Mount Wellington, 2100-2300 feet; in December, three specimens.

223. *E. smenodes*, n.sp.

♂. 16 mm. Head, palpi, and thorax yellow-ochreous, palpi somewhat sprinkled with dark fuscous. Antennæ dark grey, ciliations nearly 2. Abdomen grey. Forewings elongate, pos-

teriorly dilated, costa gently arched, without fold, apex obtuse, termen straight, oblique; pale ochreous-yellowish, posterior half mixed with ferruginous and suffusedly irrorated with dark grey; costa and dorsum shortly strigulated with dark fuscous; numerous irregular cloudy pale leaden-grey transverse striae: cilia white, basal third ferruginous mixed with dark grey, sharply limited. Hindwings with 6 and 7 stalked; grey; cilia grey-whitish, with grey subbasal line.

TASM.: Hobart; in December, one specimen. Nearly allied to the preceding, but distinguishable by the shorter antennal cilia, and quite different cilia of forewings.

224. *E. camacinana* Meyr.

(*Proselena camacinana* Meyr., Proc. Linn. Soc. N. S. Wales, 1882, 172.)

TASM.: Mount Wellington (2000 feet), Deloraine; from November to February.

225. *E. illucida*, n.sp.

♀. 17-18 mm. Head and thorax pale fuscous, shoulders suffused with whitish. Palpi ochreous-whitish, suffused with light grey towards apex. Abdomen whitish-ochreous dorsally suffused with pale grey. Forewings suboblong, costa anteriorly moderately arched, posteriorly nearly straight, apex obtuse, termen sinuate, vertical; whitish-ochreous, obliquely and suffusedly striated with shining prismatic silvery-whitish, and more or less mixed with pale brown-reddish; costa marked with oblique ferruginous-brown strigulae, from which rise about five very oblique striae of black specks mixed with red-brownish, and a red-brown stria just before termen; a large undefined semioval patch extending along dorsum from base to near tornus and reaching half across wing, formed of light red-brownish suffusion variably mixed with darker red-brown and more or less strigulated with blackish irroration: cilia ferruginous-brown with a grey line, on tornus suffused with whitish-ochreous. Hindwings with 6 and 7 approximated; grey, costal area broadly ochreous-

whitish or pale yellowish, apical area suffused and strigulated with grey; cilia ochreous-whitish sometimes tinged with yellowish, round lower part of termen and dorsum more or less tinged with grey.

Q.: Mount Tambourine, Eumundi (Turner); in October and November, two specimens. A peculiar species, superficially resembling a *Homona*, but structurally very different.

226. *E. iodes*, n.sp.

♂♀. 17-20 mm. Head and thorax grey-whitish, patagia sprinkled with ferruginous-ochreous. Palpi whitish, externally tinged with ochreous and irrorated with grey. Antennal ciliations of ♂  $1\frac{1}{2}$ . Abdomen whitish. Forewings elongate-oblong, posteriorly hardly dilated, costa towards base gently arched, posteriorly straight, without fold, apex obtuse, termen rounded, somewhat oblique; ochreous-whitish, more or less irrorated on costal half with ferruginous and on dorsal half with grey; basal patch represented by some undefined spots of ferruginous suffusion, and a ferruginous streak along costa to central fascia; central fascia very undefined, very oblique, formed of grey irroration; suffused with ferruginous towards costa, and on an elongate patch beneath middle and a praeternal spot; costal patch flattened-triangular, ferruginous, extending from near middle to near apex; an irregular transverse ferruginous blotch before termen from above middle to near tornus, tending to unite with submedian patch of central fascia: cilia whitish, basal half irrorated with ferruginous. Hindwings light grey, towards base somewhat whitish-tinged; cilia white, with partial grey subbasal line.

S. AUST.: Glenelg (Guest), Wallaroo, on coast sandhills; in November, four specimens.

227. *E. petrochroa* Low.

(*Cupua petrochroa* Low., Trans. Roy. Soc. S. Austr., 1908, 115.)

♂♀. 15-22 mm. Antennal ciliations of ♂ 1. Forewings with costa gently arched towards base, posteriorly nearly straight,



without fold, termen rounded, somewhat oblique; whitish-ochreous, strigulated throughout with yellow-ochreous; some short fuscous strigulae on costa anteriorly; markings yellow-ochreous, sometimes tinged with brownish in disc; basal patch more or less marked, outer edge angulated above middle; central fascia rather narrow, very oblique, anterior edge projecting angularly above middle, beneath this slightly convex, posterior edge suffused; two more or less indicated dots at angles of cell; anterior portion of costal patch indicated by a curved mark; sometimes a more or less marked slender transverse streak in middle towards termen: cilia whitish-ochreous. Hindwings with 6 and 7 short-stalked; ochreous-whitish, sometimes faintly greyish-tinged posteriorly; cilia whitish.

N.S.W.: Broken Hill (Lower)—VIC: Birchip (Goulie)—S. AUST.: Wallaroo; in October, November, April, and May. Larva amongst loosely spun leaves of *Zygophyllum fruticosum*, in October. This and the next two species are closely similar, and careful attention must be given to the details of descriptions.

228. *E. therina*, n sp.

♂♀. 15-16 mm. Head and thorax whitish-ochreous, patagia tinged with brownish. Palpi whitish-ochreous, externally tinged with brownish. Antennal ciliations of ♂  $\frac{3}{4}$ . Abdomen whitish-ochreous mixed with pale grey. Forewings elongate-oblong, costa anteriorly moderately arched, posteriorly nearly straight, without fold, apex obtuse, termen sinuate, oblique; light ochreous-yellowish; several minute dark fuscous strigulae on anterior half of costa; markings yellow-ochreous tinged with grey; sometimes a dot on fold at  $\frac{2}{5}$ ; central fascia moderate, very oblique, considerably narrowed towards costa, anterior edge slightly convex on lower half, marked with a black dot above middle, posterior edge prominent in disc and near tornus sending an oblique streak parallel with termen to above middle, marked with two or three black scales in disc; costal patch semi-oval, on costal edge forming three small dark fuscous spots separated by whitish-ochreous interspaces; another small dark fuscous spot on costa before apex;

a slender streak along termen: cilia whitish-ochreous, at apex somewhat mixed with fuscous. Hindwings with 6 and 7 short-stalked; light grey, darker towards apex; cilia whitish, with grey subbasal line.

TASM.: Deloraine; in November and December, four specimens.

229. *E. microstictis*, n.sp.

♂♀. 17-18 mm. Head and thorax whitish-ochreous, patagia tinged with brownish. Palpi whitish-ochreous, externally slightly tinged with brownish. Antennal ciliations of ♂ 1. Abdomen light grey, anal tuft ochreous-whitish. Forewings elongate-oblong, costa anteriorly gently arched, posteriorly nearly straight, without fold, apex obtuse, termen slightly sinuate, rather oblique; whitish-ochreous, tinged with yellowish, posteriorly with traces of darker dots or strigulae sometimes tinged with grey; two or three minute black dots on costa; a small ochreous spot marked with a minute black dot on submedian fold at  $\frac{2}{3}$ ; markings yellow-ochreous, sometimes slightly tinged with grey; central fascia slender, very oblique, anterior edge straight, marked with several minute black dots from above middle to near dorsum, posterior edge more or less irregular; a slender streak from tornus parallel to termen reaching middle, marked with several minute black dots; costal patch indicated by a short slender curved streak from costa marked with three minute black dots, and two or three blackish dots on costa beyond this; a very slender streak along central portion of termen, marked with a few black scales: cilia whitish-ochreous. Hindwings with 6 and 7 short-stalked; pale grey, posteriorly obscurely darker-strigulated; cilia whitish, with grey subbasal line.

N.S.W.: Mount Kosciusko, 5000 feet; in January, two specimens.

32. *AROTROPHORA* Meyr.

*Arotrophora* Meyr., Proc. Linn. Soc. N. S. Wales

1881, 528 ... .. type *arcuatalis*.

Antennæ in ♂ dentate, fasciculate-ciliated. Palpi long or very long, porrected, second joint with gradually diminishing

rough projecting scales above and beneath, terminal joint moderate. Thorax without or sometimes with slight crest. Forewings with 3 from angle, 7 separate, to termen. Hindwings with 3 and 4 connate, 5 approximated at base, 6 and 7 closely approximated towards base.

Closely allied to *Tortrix*, of which it may be regarded as an endemic development. In addition to the characters of antennæ and palpi, it is marked as a natural group by its geographical restriction and probably also by being almost exclusively attached to plants of the Natural Order *Proteaceæ*, especially *Banksia*, with which I have always found them associated. The species are usually inactive, and seldom removed from their foodplant. None possess a costal fold.

230. *A. cosmoplaca* Low.

(*Arotrophora cosmoplaca* Low., Trans. Roy. Soc. S. Austr., 1903, 219.)

W. Austr.: Waroona (Berthoud), Perth, Geraldton; in October and November. A handsome and very distinct species.

231. *A. ochraceella* Walk.

(*Crambus ochraceellus* Walk., Cat. xxvii., 177; *Arotrophora ochraceella* Meyr., Proc. Linn. Soc. N. S. Wales, 1882, 175.)

N.S.W.: Newcastle, Sydney; in October. Attached to *Banksia serrata*, the larva probably feeding in the cones.

232. *A. charistis*, n.sp.

♂. 16-17 mm. Head and thorax white. Palpi  $3\frac{1}{2}$ , ochreous, white above and towards base beneath. Antennæ strongly dentate. Abdomen whitish. Forewings elongate, rather narrow towards base, posteriorly dilated, costa slightly arched, apex obtuse, termen straight, rather oblique; white, with some small fine scattered pale ochreous-yellowish strigulae, especially towards margins, where they are touched with grey; a deep yellow streak from before  $\frac{1}{4}$  of costa to beneath middle of disc, thence angulated upwards to end of cell, narrowed towards extremities; a straight

deep yellow streak, suffused with ferruginous-orange posteriorly from apex to tornus: cilia white. Hindwings whitish; cilia white.

Q.: Cooktown(Meek); two specimens.

233. *A. arcuatalis* Walk.

(*Scopula arcuatalis* Walk., Cat. xxxiv., 1474; *Crambus submarginellus* ib. xxxv., 1760; *Eromene transcissella* ib. 1762; *Arotrophora arcuatalis* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 530.)

N.S.W.: Sydney, Blackheath (3500 feet)—VIC.: Gisborne, Dimboola (Lyell)—TASM.: Launceston—S. AUST.: Mount Lofty, Mount Gambier, Wirrabara—W. AUST.: Bridgetown (Berthoud), Perth, York, Geraldton; from October to December and February to April. Larva in flower-cones of *Banksia serrata*, in July and August, and again in January.

234. *A. chionaula*, n.sp.

♂♀. 15-16 mm. Head white. Palpi  $4\frac{1}{4}$ , fuscous, white above and towards base beneath. Antennæ in ♂ shortly dentate. Thorax white, shoulders more or less suffused with fuscous. Abdomen ochreous-whitish tinged with grey. Forewings elongate, posteriorly rather dilated, costa anteriorly gently arched, posteriorly straight, apex round-pointed, termen faintly sinuate, oblique; whitish densely irrorated with dark fuscous, appearing dark grey; sometimes an undefined streak of ferruginous-red suffusion beneath costa anteriorly; a suffused irregular white longitudinal median streak from base to end of cell, thence bent up to costa before apex; a more or less marked spot of ochreous-yellowish suffusion beneath this in middle of disc; sometimes some ferruginous-red scales at apex: cilia whitish, with three fuscous shades tipped with dark fuscous. Hindwings whitish-grey or light grey, becoming darker grey towards apex; cilia whitish, with two indistinct grey shades.

W. AUST.: Perth; in November, nine specimens.

235. *A. canthelias*, n.sp.

♀. 21 mm. Head and thorax light fuscous irrorated with whitish. Palpi 5, ochreous irrorated with grey and beneath with whitish. Abdomen light greyish-ochreous. Forewings elongate, posteriorly considerably dilated, costa gently arched, apex obtuse, termen somewhat rounded, slightly curved, rather oblique; ferruginous-ochreous irrorated with dark grey, dorsal third suffused with grey and sprinkled with whitish; trapezoidal blotch of dark grey suffusion extending on costa from near base to beyond  $\frac{2}{3}$ , discal edge much shorter and broadly suffused with bright ferruginous, posteriorly reaching end of cell, posterior side edged by a fascia of white suffusion sprinkled with grey strigulae and extended to dorsum: cilia white suffusedly barred with grey. Hindwings pale grey, faintly ochreous-tinged; cilia grey-whitish.

N.S.W.: Mittagong; in March, one specimen, beaten from *Banksia spinulosa*.

236. *A. pirastis*, n.sp.

♀. 16 mm. Head and thorax pale fuscous mixed with whitish. Palpi 6, fuscous, darker beneath with base whitish, sprinkled with whitish above. Abdomen light fuscous. Forewings elongate, posteriorly slightly dilated, costa anteriorly moderately, posteriorly slightly arched, apex obtuse, termen straight, oblique; fuscous, irregularly strigulated with ferruginous and sprinkled with whitish; an undefined triangular patch of darker fuscous suffusion extending on costa from  $\frac{1}{3}$  to apex, with angle resting on end of cell; a small ferruginous spot with some black scales beneath submedian fold at  $\frac{1}{3}$ , another beneath lower angle of cell, and a short linear transverse mark on upper angle; some scattered blackish scales on dorsum and termen: cilia light fuscous, with two darker shades. Hindwings and cilia pale fuscous.

TASM.: Deloraine; in November, one specimen.

237. *A. castanea*, n.sp.

♂. 20 mm. Head whitish. Palpi 6, dark grey, mixed externally with ferruginous-ochreous, above and beneath sprinkled

with whitish. Antennæ shortly dentate, thickened on central third. Thorax whitish, shoulders suffused with ferruginous-brownish. Abdomen pale grey. Forewings elongate, posteriorly rather dilated, costa anteriorly gently, posteriorly slightly arched, apex obtuse, termen almost straight, oblique; ferruginous-brownish, much mixed with grey; dorsal third mixed with whitish, with a few black specks; an elongate-triangular patch of dark grey suffusion extending along costa from  $\frac{1}{4}$  to apex, mixed with deep ferruginous-brown, undefined anteriorly, darkest posteriorly, with angle resting on upper angle of cell; posterior margin of cell marked with bright ferruginous-brown, with a few black specks: cilia light grey, with two dark grey shades. Hindwings light grey, darker-strigulated; cilia whitish-grey, with faint darker subbasal line.

S. AUST.: Mount Lofty(?); one specimen. Type in Coll. Lower.

238. *A. xythoptera* Meyr.

(*Arotrophora xythoptera* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 529.)

N.S.W.: Sydney, Mittagong; in August and March. Larva in a silken tube among leaves of *Lomatia silaifolia*; probably also on *Banksia*, as the imago has been beaten from it.

239. *A. anemarcha* Low.

(*Tortrix anemarcha* Low., Trans. Roy. Soc. S. Austr. 1902, 236.)

♂♀. 24-30 mm. Head and thorax light brownish-ochreous. Palpi 6. Antennæ in ♂ strongly dentate. Forewings elongate-oblong, posteriorly rather dilated, costa gently arched, apex obtuse, termen nearly straight, rather oblique; pale greyish or pale ochreous, reticulated throughout with ferruginous-brown or ferruginous-ochreous: cilia ochreous, irrorated or suffused with ferruginous-brownish. Hindwings whitish-grey, obscurely strigulated with grey; cilia whitish.

N.S.W.: Sydney—TASM.: Launceston—W. AUST.: Perth; in October and November, beaten from *Banksia marginata*. Probably rather common but very retired in habit. In Lower's

original description the size given, 20 mm., is a clerical error for 30 mm.

240. *A. ammodēs*, n.sp.

♂♀. 20-22 mm. Head, palpi, and thorax ochreous-brown, palpi 5, tinged with ferruginous. Antennæ in ♂ strongly dentate. Abdomen grey. Forewings elongate, posteriorly dilated, costa moderately arched, apex obtuse, termen almost straight, rather oblique; ferruginous-brown; a rather broad streak of grey suffusion with a few blackish specks extending along dorsum from near base to a large similar subtriangular tornal patch, which limits cell posteriorly and reaches its upper angle; a minute blackish dot above lower angle of cell: cilia rather dark grey. Hindwings grey, obscurely darker-strigulated; cilia whitish-grey, with grey subbasal shade.

VIC.: Dandenong, Beaconsfield (Lyell); in November and March, two specimens.

241. *A. pertinax*, n.sp.

♀. 22 mm. Head and thorax light fuscous. Palpi 5, light fuscous sprinkled with darker. Abdomen whitish-fuscous. Forewings suboblong, costa moderately arched, apex obtuse, termen almost straight, oblique; light fuscous, strewn throughout with ferruginous-fuscous strigulæ sprinkled with black specks; a slight darker suffusion indicating a basal patch with irregularly angulated outer edge, and an angulated central fascia confluent with a large triangular costal patch extending nearly to apex: cilia light fuscous mixed with darker (imperfect). Hindwings pale grey, indistinctly darker-strigulated; cilia whitish-grey.

VIC.: Healesville; in November, one specimen.

242. *A. salebrata*, n.sp.

♂♀. 15-16 mm. Head and thorax light fuscous irrorated with whitish. Palpi  $3\frac{1}{2}$ -4, fuscous irrorated with whitish. Antennæ in ♂ rather strongly dentate. Abdomen light greyish-ochreous. Forewings elongate, posteriorly somewhat dilated, costa gently arched, apex obtuse, termen hardly rounded, oblique; light

fuscous, more or less distinctly strigulated with dark fuscous, especially on margins; an undefined trapezoidal patch of dark fuscous suffusion extending on costa from near base to  $\frac{3}{4}$ , discal edge much shorter and terminated posteriorly by a white transverse-linear mark on end of cell; some whitish irroration beyond this patch, especially towards costa; two patches of dark fuscous irroration towards termen more or less distinctly outlined with dark fuscous and sometimes partially edged with whitish, upper subtriangular, lower larger, somewhat reniform: cilia pale fuscous irrorated with whitish, with three interrupted darker fuscous shades indicating bars. Hindwings uniform pale fuscous; cilia whitish-fuscous, towards tips whitish.

VIC.: Gisborne(Lyell); in February and March, two specimens.

243. *A. humerella* Walk.

(*Crambus humerellus* Walk., Cat. xxxv., 1758; *Tortrix centurionana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 518.)

N.S.W.: Sydney—VIC.: Beaconsfield(Lyell)—S. AUSTR.: Mount Lofty; in July and August.

244. *A. hemerana* Meyr.

(*Arotrophora hemerana* Meyr., Proc. Linn. Soc. N. S. Wales, 1882, 176.)

Female with forewings narrower than in ♂, termen more oblique.

VIC.: Mount St. Bernard, 5000 feet (Lyell)—TASM.: Mount Wellington, 3000 feet; in February.

245. *A. confusana* Walk.

(*Pædisca confusana* Walk., Cat. xxviii., 381; *Arotrophora confusana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 532.)

N.S.W.: Sydney; in October, March, and April, amongst *Banksia*.

246. *A. lividana* Meyr.

(*Arotrophora lividana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 531.)



Q.: Brisbane—N.S.W.: Sydney, Bulli, Mittagong, Bathurst—VIC.: Gisborne, Dimboola(Lyell)—TASM.: Launceston, George's Bay—S. AUST.: Mount Lofty—W. AUST.: Albany, Perth, York; in October, November, January, March, and April. The species varies a good deal, even in form of wing; some specimens may be said to have the costa moderately arched, others slightly; the Bathurst example is the largest (♀, 16 mm.), with the longest palpi, and has the termen of forewings sinuate, but I am unable to regard it as distinct; no two specimens are quite alike. I was, however, accustomed to meet with the species commonly, and never had any doubt of its identity. I mention these particulars because they contribute to the difficulty of what follows.

I have bred this species from the larva under circumstances so singular that I cannot interpret them to my own satisfaction, and therefore give them at length in the hope that local workers will make investigations on the subject. I found some extraordinary larvæ, of which I made the following description: Larva apodal, slender, cylindrical, head small, semicircular, segments 2-4 (especially 2) much swollen, all incisions well-marked, anal segment pointed and with short spines towards apex; positions of all legs indicated by feeble sucking-bases; ordinary spiracles absent, but two dorsal spots on each of segments 2-4 greatly enlarged and furnished with a longitudinal slit; rather dark fuscous, reddish-tinged; head and back of segment 2 blackish, segments 2 and 3 with a reddish dorsal line; large dorsal spots of segments 2-4 light ochreous; all other spots obsoletely represented by slight depressions; anal segment blackish towards apex: mines a long rather broad gallery down leaves of a large coarse sedge-like plant growing in dry bush at Botany Bay, in August; the last three segments of body are held at a right angle and used as a lever for motion within the gallery; pupation outside the mine, amongst refuse. From these larvæ I bred one rather small and pale female specimen, with somewhat less ferruginous suffusion than any other example possessed, forewings hardly dilated posteriorly, costa slightly arched: I have a captured male from Sydney which hardly differs from it, and

shows the normal structure of the antennæ, which is characteristic, the dentations being very strong. There are three possible interpretations of this recorded observation, viz.:

(1.) The larval habit recorded is that of *A. lividana*: against this may be set the repeatedly observed fact that the imago is attached to *Banksia*, from which I have habitually beaten it, this being recorded in my diary, and that the allied species are all equally attached to *Banksia*, implying community of habit; whilst the other bred species of the genus are known to feed on *Banksia* and its allies, and their larvæ are quite normal in structure. The larva described above is altogether singular, and I know nothing approaching it.

(2.) The larva described is that of some other species unknown, and the larva of *A. lividana* was introduced accidentally with the foodplant without being observed; as only one was bred, this is conceivable, but it does not seem at all likely. I always kept each kind of larva in a small separate receptacle.

(3.) Two species are confused under the name of *A. lividana*, one feeding as described, the other being a *Banksia*-feeder; this explanation derives some support from the variation in the specimens, but involves the improbable supposition that two species so closely allied as to be practically indistinguishable have larvæ so divergent in structure.

For myself, I can only say of the above explanations that all three seem to me nearly equally improbable. I fully expected some specially interesting insect from these curious larvæ, and was much disappointed to rear a common Tortricid of which I had regarded the habits as practically already known. If obliged to choose one of the three explanations, I should select the second.

247. *A. atimana* Meyr.

(*Arotrophora atimana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 533.)

Q.: Brisbane(Turner)—N.S.W.: Sydney; in August, September, and January. A small thoracic crest is present in this species.

248. *A. anaptis*, n.sp.

♂♀. 16-18 mm. Head, palpi, and thorax fuscous finely sprinkled with whitish, palpi  $3\frac{1}{2}$ . Antennæ in ♂ moderately dentate. Abdomen ochreous-grey. Forewings elongate, posteriorly dilated, costa moderately arched, apex obtuse, termen straight, oblique; fuscous, finely sprinkled with whitish, towards margins strigulated with darker; a trapezoidal darker fuscous blotch on dorsum before middle, its upper edge forming anteriorly a spot of deep ferruginous and blackish scales reaching fold; a large subtriangular suffused darker fuscous blotch extending on costa from before  $\frac{1}{4}$  to beyond middle and reaching fold, variably mixed with deep ferruginous and blackish, darkest posteriorly, and containing a lighter patch on costa; beyond this is sometimes a broad fascia of stronger whitish irroration, in which are two black dots on angles of cell; two or three somewhat darker spots on costa posteriorly, and an irregular transverse streak before termen: cilia fuscous, slightly whitish-sprinkled, with darker sub-basal line. Hindwings grey; cilia pale grey.

N.S.W.: Blackheath(3500 feet), Mount Kosciusko(4700 feet)  
—TASM.: George's Bay; in January and February, seven specimens.

33. *EULIA* Hb.

*Eulia* Hb., Verz. 392 (1826) ... type *ministrana*.  
*Lophoderus* Stph., Cat. Brit. Ins. 184(1829) ... type *ministrana*.  
*Gobæa* Walk., Cat. xxxv., 1805(1866) ... type *copiosana*.

Antennæ in ♂ moderately ciliated. Palpi moderate, proctect, second joint dilated with rough scales above and beneath, terminal moderate. Thorax with well-developed crest. Forewings with 3 from angle, 7 separate, to termen. Hindwings with 3 and 4 connate, 5 approximated to 4 at base, 6 and 7 approximated towards base.

A genus of some extent, but mainly European and American, especially developed in South America.

249. *E. copiosana* Walk.

(*Gobæa copiosana* Walk., Cat. xxxv., 1805; *Tortrix ceramicana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 512; *T. argyraspis* Low., Proc. Linn. Soc. N. S. Wales, 1900, 410.)

Q.: Brisbane; in December and May. This species seems to be distinctly related to the South American forms of the genus.

## 34. HARMOLOGA Meyr.

*Harmologa* Meyr., Trans. N. Zeal. Inst. 1882, 44... type *oblongana*.

Antennæ in ♂ ciliated. Palpi moderate, porrected, second joint with rough projecting scales above and beneath, terminal moderate. Thorax with crest. Forewings with 3 from angle, 7 separate, to termen. Hindwings with 3, 4, 5 approximated towards base, 6 and 7 stalked or approximated towards base.

Besides the following, there are about eight New Zealand species.

250. *H. miserana* Walk.

(*Teras miserana* Walk., Cat. xxviii., 301; *T. canigerana* ib. 301; *T. absumptana* ib. xxxv., 1780; *Cacæcia miserana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 498.)

Q: Cairns (Dodd), Nelson (Lyell), Toowoomba—N.S.W.: Newcastle, Sydney, Wollongong; throughout the year. Also occurs in Java and Assam. Larva rather slender, cylindrical, with scattered whitish hairs; grey-whitish, posteriorly ochreous-tinged; two brownish-ochreous spots placed longitudinally on back of each segment; lateral line moderately broad, reddish-fuscous; head dark fuscous; segment 2 whitish, posteriorly tinged with ochreous, posterior angles suffusedly blackish: feeds between joined leaves of *Ficus benjamina* and another *Ficus* not identified, rolling up a corner for shelter, in August (and doubtless most of the year); pupation in same position.

251. *H. croblyota*, n.sp.

♂. 25 mm. Head white, between antennæ with a long projecting tuft of hairs suffused with light grey. Palpi white, with

a longitudinal dark grey streak on side, above with expanded white hairs. Antennal ciliations  $\frac{1}{3}$ . Thorax white sprinkled with grey. Abdomen pale greyish-ochreous. Forewings sub-oblong, costa anteriorly moderately, posteriorly slightly arched, with moderately broad fold reaching from base to middle, apex rounded-obtuse, termen rounded, rather oblique; white, somewhat sprinkled with pale greyish, and strewn throughout with dark grey strigulae partially mixed with black and ferruginous; the black markings appear to indicate edge of basal patch, anterior edge of central fascia, and triangular costal patch, but these are hardly traceable except towards costa; a rather large dorsal patch of grey suffusion before tornus: cilia white, on basal half with indications of undefined dark grey bars. Hindwings thinly scaled, whitish, towards apex suffused with light grey; cilia grey-whitish.

N. GUINEA: Fakfak; one specimen. Allied to *H. miserana*, but larger, with hindwings more whitish, and specially characterised by the peculiar frontal tuft.

### 35. CNEPHASIA Curt.

*Cnephasia* Curt., Brit. Ent. iii., 100(1826) ... type *pascuana*.  
*Sciaphila* Tr., Schmett. Eur. vii., 233(1829) . type *wahlbomiana*.  
*Dipterina* Meyr., Proc. Linn.Soc. N.S.Wales,  
 1881, 523... .. type *imbriferana*.

Antennæ in ♂ moderately or strongly ciliated. Palpi moderate or long, porrected, second joint with projecting scales above and beneath, terminal moderate. Thorax sometimes with small crest. Forewings with 3 from angle, 7 separate, to termen. Hindwings with 3 and 4 connate, 5 approximated to 4, 6 and 7 stalked.

A genus of considerable extent and nearly cosmopolitan.

### 252. *C. periorma*, n.sp.

♂♀. 13-16 mm. Head, palpi, antennæ, thorax, and abdomen dark fuscous; palpi with a longitudinal orange-yellow band on second joint, base whitish; antennæ in ♂ dentate on apical half,

ciliations 2. Forewings elongate-triangular, costa gently arched, apex obtuse, termen rather bowed, little oblique; dark fuscous, irregularly marked and striated with darker; basal patch containing two or three blue-metallic striæ, its edge marked by a strong curved dark fuscous stria, followed by two pairs of subconfluent blue-metallic striæ; disc beyond this strewn with scattered pale bluish hairscales; a dark bronzy-fuscous streak from  $\frac{2}{3}$  of costa to termen above tornus, preceded by a pair of lighter striæ becoming gradually violet-blue-metallic downwards, and followed by a violet-blue-metallic stria, confluent beneath with a similar submarginal stria; a light ochreous streak runs round apex, sometimes nearly obsolete: cilia fuscous, with interrupted dark fuscous subbasal shade. Hindwings dark fuscous irregularly striated with darker, base of scales pale; along lower half of termen a suffused blackish patch, irregularly marked on marginal portion with violet-golden-metallic and on inner portion with light ochreous-yellowish; cilia fuscous, with blackish-fuscous subbasal shade, mixed with pale golden-metallic on terminal patch.

Q.: Cairns(Dodd); in October and April, six specimens. A very curious species, but *C. catenata* forms a clear connecting link with normal forms.

253. *C. catenata*, n.sp.

♂. 15 mm. Head and thorax fuscous. Palpi rather long, fuscous, second joint with a longitudinal ochreous-orange stripe. Antennæ dentate, ciliations 1. Abdomen dark fuscous, anal tuft yellowish. Forewings moderate, posteriorly dilated, costa moderately arched, apex obtuse, termen bowed, somewhat oblique; rather dark purplish-fuscous, with scattered dark ferruginous-brown strigulæ; costa strigulated with dark ferruginous-brown, costal edge whitish between these; edge of basal patch dark ferruginous-brown, obtusely angulated above and in middle; central fascia very narrow, dark ferruginous-brown, angulated and twice interrupted in disc, dorsal section somewhat broader; a dark ferruginous-brown streak from  $\frac{2}{3}$  of costa to middle of termen; apical area beyond this striated with leaden-metallic and

ferruginous-brown : cilia light ochreous with two purplish-fuscous shades sprinkled with dark fuscous. Hindwings ochreous-whitish, posteriorly strigulated with grey, apex suffused with grey; some dark purplish-grey suffusion on dorsum terminated by a dark fuscous trapezoidal spot on tornus; cilia whitish with a faint rosy tinge, with grey subbasal line becoming dark grey on tornus.

N.S.W.: Roseville, Sydney(Lyell); in April, one specimen. Type in Coll. Lyell.

254. *C. orthias*, n.sp.

♂. 20 mm. Head, palpi, and thorax dark grey, thoracic crest blackish. Antennal ciliations 4. Abdomen light grey. Forewings elongate, moderate, rather dilated posteriorly, costa moderately arched, apex obtuse, termen almost straight, rather oblique; light grey, somewhat sprinkled with whitish, and strigulated throughout with black accompanied by a few ferruginous scales; basal patch rather small, darker, somewhat mixed with ferruginous-brown, edged by a strong straight direct black streak attenuated to a line on costa, and somewhat bent just beneath it; central fascia rather narrow, straight, rather oblique, darker, edged with irregular blackish striæ; apical area beyond an irregular stria from  $\frac{2}{3}$  of costa to tornus suffused with darker grey, on costa marked with four small blackish-grey spots: cilia light grey mixed with darker, with blackish-grey subbasal shade. Hindwings light grey, suffusedly spotted with darker; cilia grey-whitish, with two grey shades.

Vic.: Castlemaine (Drake); in October, one specimen. Type in Coll. Lyell.

255. *C. lenæa*, n.sp.

♂. 18 mm. Head and palpi grey sprinkled with darker and tinged with reddish. Antennal ciliations 4. Thorax dark grey mixed with ferruginous. Abdomen pale grey. Forewings elongate-triangular, costa moderately arched, apex obtuse, termen faintly sinuate, rather oblique; light grey much suffused with whitish, with slight scattered strigulæ of black and ferruginous scales; some small darker spots along costa; basal patch short,

suffused with ferruginous-reddish and strongly edged with black, edge angulated above middle and indented below middle; central fascia very narrow, straight, rather oblique, suffused with ferruginous-reddish and edged with black, posterior edge rather rounded-prominent above middle; indistinct darker spots towards tornus and middle of termen: cilia grey mixed with whitish and light brown-reddish, basal third spotted with darker grey. Hindwings whitish-grey coarsely strigulated with grey; cilia grey-whitish, with two grey shades.

♀. Forewings more elongate and less dilated than in ♂; dark grey, suffused throughout with ferruginous-reddish, and strigulated with deep ferruginous mixed with black, with scattered grey-whitish scales; markings as in ♂, but hardly traceable except posterior edge of central fascia which is defined with deep ferruginous edged with some grey-whitish scales, rounded prominence above middle well-marked: cilia grey much suffused with ferruginous-reddish, with two undefined blackish lines, tips ochreous-whitish.

W. Aust.: Waroona (Berthoud); in September, two specimens — Vic.: Castlemaine (Drake); in October, one specimen. Types in Coll. Lyell.

256. *C. phosphora*, n.sp.

♂♀. 18-20 mm. Head, palpi, and thorax grey or dark grey, sometimes slightly reddish-tinged. Antennal ciliations in ♂ 4. Abdomen grey. Forewings rather elongate, moderate, dilated posteriorly, costa moderately arched, apex obtuse, termen nearly straight, oblique; grey or dark grey, somewhat sprinkled with whitish and ferruginous-reddish, in ♀ darker and more reddish-tinged, with scattered dark strigæ of blackish irroration with some reddish scales, especially on dorsum and towards termen; basal patch and central fascia dark grey, often sprinkled with ferruginous-reddish, margined with cloudy blackish lines, edge of basal patch curved or rather bent above middle, central fascia moderate, oblique; four or five small dark grey spots on posterior half of costa: cilia greyish, sometimes reddish-sprinkled, with



two dark grey lines, basal third sometimes barred with darker. Hindwings clear whitish, with a few scattered grey spots; a rather narrow suffused grey terminal fascia, broader at apex; cilia whitish, with dark grey subbasal line and pale grey post-median shade.

TASM.: Mount Wellington, 3100 feet; in November and December, nine specimens. Nearly allied to *C. rupicolana*, but immediately distinguished by the quite different hindwings.

257. *C. rupicolana* Meyr.

(*Dipterina rupicolana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 526; *D. refluana* ib. 525.)

N.S.W.: Murrurundi, Sydney, Blackheath(3500 feet)—VIC.: Gisborne(Lyell), Wandin(Jarvis), Melbourne—S. AUST.: Mount Lofty(Guest); from August to October. The form *refluana* is merely a dark variety.

258. *C. rigida*, n.sp.

♂. 17 mm. Head dark brown with a whitish central stripe. Palpi dark fuscous, apex of second joint brown-whitish. Antennal ciliations 1. Thorax blackish marked with white, patagia white with a black subbasal bar and becoming dark brown at tips. Abdomen pale ochreous-yellowish. Forewings elongate, posteriorly dilated, costa slightly arched, apex obtuse, termen hardly rounded, rather oblique; ochreous-white; markings dark leaden-grey edged with strong black striæ of raised scales; basal patch marked with three black striæ, with some whitish suffusion between first two, outer edge irregular, excised below middle, followed by two or three blackish strigulæ towards dorsum; a black dot on costa before central fascia, and two beyond it; central fascia narrow, almost straight, direct, followed by a transverse-linear black mark in disc; a narrow fascia from  $\frac{5}{8}$  of costa to tornus; some black dots round apex and termen irregularly connected with this and each other: cilia whitish-ochreous, with two dark grey partially interrupted shades. Hindwings grey,

darker posteriorly; cilia whitish-ochreous, with broad grey sub-basal shade.

W. AUSTR.: Waroona(Berthoud); in September, one specimen. Type in Coll. Lyell.

259. *C. edilis*, n.sp.

♂. 13 mm. Head and thorax brown sprinkled with whitish and blackish, thoracic crest well developed. Palpi rather long, brown sprinkled with black, tip white. Antennal ciliations 2. Abdomen dark grey. Forewings elongate-oblong, costa anteriorly gently, posteriorly hardly arched, apex obtuse, termen almost straight, rather oblique; whitish, with a few scattered brownish strigulae, on costa with a few blackish dots; markings dark ferruginous-brown mixed with black; basal patch moderate, outer edge almost rectangularly angulated in middle; central fascia moderately broad, straight, very oblique; costal patch moderate, semicircular; a triangular blotch extending along upper  $\frac{2}{3}$  of termen, its apex reaching to disc beneath posterior edge of costal patch: cilia light greyish, with a ferruginous-brown subbasal shade mixed with blackish. Hindwings dark grey, lighter towards base; cilia whitish-grey, with dark grey subbasal shade.

VIC.: Lorne(Lyell); in February, one specimen. Type in Coll. Lyell.

260. *C. tribolana* Meyr.

(*Dipterina tribolana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 525; *D. gnophodryas* Low., Trans. Roy. Soc. S. Austr., 1902, 254.)

VIC.: Macedon(Raynor)—TASM.: Mount Wellington; in November and December.

261. *C. crotala*, n.sp.

♂. 13-14 mm. Head, palpi, and thorax fuscous mixed with white. Antennal ciliations 4. Abdomen light fuscous. Forewings elongate, posteriorly somewhat dilated, costa gently arched, apex obtuse, termen nearly straight, rather strongly

oblique; light fuscous more or less mixed with whitish, with scattered spots and strigulae of dark fuscous irroration; markings somewhat darker fuscous, irregularly marked with strigulae of blackish irroration accompanied by some whitish-ochreous scales; basal patch moderate, outer edge rather acutely angulated above middle; central fascia moderately broad, acutely angulated above middle, becoming obsolete on dorsal third; costal patch moderate, rounded; a very undefined terminal fascia becoming obsolete towards tornus: cilia light fuscous, with dark fuscous subbasal line. Hindwings rather dark grey; cilia light greyish, with dark fuscous subbasal line.

TASM.: Deloraine; in November and December, three specimens.

262. *C. stereodes*, n.sp.

♂♀. 15-17 mm. Head, palpi, and thorax fuscous mixed with dark fuscous. Antennal ciliations in ♂  $2\frac{1}{2}$ . Abdomen dark grey. Forewings elongate, slightly dilated posteriorly, costal gently arched, apex obtuse, termen slightly rounded, rather oblique; fuscous or dark fuscous, sometimes more or less sprinkled with ferruginous, irregularly strigulated with blackish; costal edge sometimes whitish; markings darker, much mixed with blackish, especially on margins; edge of basal patch curved or rather bent in middle; dorsal  $\frac{2}{3}$  between this and central fascia more or less mixed with whitish; central fascia moderately broad, narrowed towards costa, little oblique; a very undefined fascia from  $\frac{2}{3}$  of costa to tornus: cilia grey, with interrupted blackish subbasal shade. Hindwings dark fuscous, somewhat lighter anteriorly; cilia fuscous, with darker subbasal shade.

VIC.: Gisborne(Lyell), Wandin(Jarvis), Macedon, Healesville—TASM.: Deloraine, Mount Wellington; from October to December, nine specimens.

263. *C. mermera*, n.sp.

♂♀. 15-18 mm. Head and thorax fuscous mixed or sometimes suffused with whitish. Palpi fuscous irrorated with dark fuscous, mixed with white towards apex of joints. Antennae in ♂ dentate

on apical half, ciliations  $1\frac{1}{2}$  diminishing to 1. Abdomen light fuscous mixed with whitish. Forewings elongate, posteriorly dilated, costa gently arched, apex obtuse, termen almost straight, oblique; whitish, variably and irregularly marbled with fuscous or sometimes mostly suffused with fuscous, more or less mixed irregularly with whitish-ochreous or pale yellowish and sometimes in disc and towards dorsum with ferruginous; markings rather dark fuscous marked with blackish; basal patch moderate, outer edge obtusely angulated in middle; central fascia rather broad, oblique, on lower half sometimes obsolete except posterior edge; four or five subquadrate spots on posterior half of costa, two of them sometimes confluent into a blotch; a variable irregular blotch before middle of termen: cilia whitish barred with fuscous, with a fuscous subbasal shade. Hindwings in ♂ whitish suffusedly striated with light grey, in the Gisborne specimen light grey striated with darker, in ♀ grey; cilia whitish, with grey subbasal line.

VIC.: Lorne(3 ♂'s), Gisborne(1 ♂)(Lyell)—TASM.: Mount Wellington, 3100 feet (3 ♀'s); from December to March. This is a variable species, and the fact that the sexes are from different localities introduces a slight element of uncertainty, but there seems no reason to dispute their identity.

264. *S. sulfurosa*, n.sp,

♂♀. 9-12 mm. Head and thorax pale whitish-yellow, shoulders narrowly dark grey. Palpi dark reddish-grey, towards apex white. Antennal ciliations of ♂ 1. Abdomen light grey, anal tuft whitish. Forewings elongate, rather narrow, costa slightly arched, apex obtuse, termen obliquely rounded; pale whitish-yellow; a black dot on base of costa; a small triangular black spot on costa at  $\frac{1}{4}$ , whence a transverse direct line of black specks runs to dorsum, accompanied with two tufts of yellower scales; central fascia and costal patch united to form a rather broad dark grey black-mixed fascia beyond middle, considerably expanded towards costa; anterior edge marked with a blackish stria forming a triangular black spot on costa and accompanied by

some raised scales, posterior edge also marked with raised scales in disc; a line of black specks from costa at  $\frac{4}{5}$  to termen above tornus: cilia grey-whitish, towards base sprinkled with black specks. Hindwings grey, in ♂ thinly scaled and subhyaline anteriorly; cilia pale greyish.

Q.: Stradbroke Island (Turner)—N.S.W.: Sydney—VIC.: Melbourne(Drake); from September to February, seven specimens.

265. *C. ochroptila*, n.sp.

♂. 16 mm. Head and thorax fuscous-whitish. Palpi whitish-ochreous somewhat mixed with fuscous. Antennal ciliations minute. Abdomen pale greyish-ochreous sprinkled with fuscous. Forewings elongate, posteriorly dilated, costa slightly arched, apex obtuse, termen slightly rounded, somewhat oblique; light brown irregularly mixed with darker; dorsal third mixed with grey-whitish, and marked with longitudinal rows of small spots or strigulae of blackish irroration; costa spotted and strigulated with blackish; a large subtriangular blotch of dark fuscous suffusion extending on costa from about  $\frac{1}{4}$  to  $\frac{4}{5}$ , its apex in middle of disc, posterior edge slightly concave, margined by an ochreous-whitish blotch extending to termen and nearly to tornus, containing a roundish central spot of brown suffusion connected with middle of termen by a brown and black streak: cilia ochreous-whitish, barred with brown sprinkled with blackish. Hindwings light fuscous, suffusedly spotted with darker; dorsal edge clothed with dense long hairs, beneath with a deep iridescent groove filled anteriorly with long ochreous-yellow hair-scales and edged interiorly with rough blackish-grey hairs; cilia whitish-ochreous, with fuscous subbasal shade.

N.S.W.: Sydney; in October, one specimen. An abnormal species, recalling some forms of *Argyroploce*, but there is no basal pecten in hindwings.

36. XENOTHICTIS, n.g.

Palpi long, porrected, basal joint considerably elongated, swollen, second joint long, clothed with dense appressed scales

diminishing to apex, terminal joint absent. Thorax smooth. Forewings with 3 from angle, 7 separate, to termen. Hindwings with termen indented or excised above middle; 3 and 4 connate, 5 approximated to 4 at base, 6 and 7 closely approximated towards base.

Type *X. paragona* Meyr. Probably related to *Cnephasia*; it has the neuration of *Tortrix*, but differs by the peculiar palpi and form of hindwings.

266. *X. paragona*, n.sp.

♀. 23 mm. Head, palpi, and thorax pale brownish-ochreous. Abdomen grey. Forewings elongate, posteriorly dilated, costa gently arched towards extremities, somewhat sinuate in middle, apex obtuse, termen slightly sinuate, little oblique; light brownish-ochreous sprinkled with brown; a few minute black strigulae on costa; edge of basal patch indicated on upper third by a sinuate line of black specks; a small cloudy reddish-fuscous dot on end of cell; an angulated subterminal series of minute black dots on veins: cilia light ochreous (imperfect). Hindwings with termen deeply excavated above middle, so as to form an obtuse prominence on vein 3; grey, darker posteriorly.

LOYALTY Is.: Lifu; one specimen.

267. *X. semiota*, n.sp.

♀. 23 mm. Head, palpi, and thorax brown. Abdomen grey. Forewings elongate, posteriorly dilated, costa gently arched towards base, somewhat sinuate in middle, nearly straight posteriorly, apex obtuse, termen faintly sinuate, little oblique; brown, faintly lilac-tinged; basal patch small, edge indicated by several small black dots, angulated in middle; a small dark fuscous spot on costa before middle, a small dark fuscous spot of raised scales on fold beneath it, and two or three small black dots between these; indistinct irregular slightly darker patches on costa at  $\frac{3}{4}$ , before tornus, and towards termen, edged with scattered small blackish strigulae: cilia ochreous-brownish, on costa barred with dark grey. Hindwings sinuate-indented on

upper half of termen; dark grey, obscurely darker-strigulated; cilia grey, with darker subbasal shade.

LOYALTY Is.: Lifu; one specimen.

### 37. *DIAC TENIS* Meyr.

*Diactenis* Meyr., Journ. Bomb. Nat. Hist. Soc.

xvii., 979(1907) ... .. type *pteroneura*.

Antennæ in ♂ moderately ciliated. Palpi moderate, porrected, second joint with rough projecting scales diminishing to apex, terminal short. Forewings with tufts of scales on surface; 1b simple, 3 and 4 closely approximated from angle, 7 separate, to termen, cell in ♂ very short and narrow. Hindwings  $\frac{1}{2}$ , cilia  $1\frac{1}{4}$ ; 3 and 4 separate, cell open between 4 and 6, 4 and 5 rising as branches of parting-vein from near base, 6 and 7 as branches of upper margin of cell from before middle.

Only one species is known at present; it may be regarded as a development of *Argyrotoxa*.

### 268. *D. pteroneura* Meyr.

(*Diactenis pteroneura* Meyr., Journ. Bomb. Nat. Hist. Soc. xvii., 980.)

♂♀. 8-10 mm. Forewings whitish-ochreous, pellucid between veins, veins fringed with ochreous and dark fuscous scales; upper half of central fascia ochreous, suffused on costa with blackish; a curved posterior transverse series of black specks in disc. Hindwings pellucid, veins fringed with whitish and grey scales.

Q.: Cairns(Dodd); in October, one specimen. Also from India and Ceylon.

### 38. *ARGYROTOXA* Stph.

*Argyrotoxa* Steph., Cat. Brit. ii., 189(1829)

(prav. *Argyrotoxa*) ... .. type *bergmanniana*.

*Epitrichosma* Low., Trans. Roy. Soc. S. Austr.

1908, 320 ... .. type *neurobapta*.

Antennæ in ♂ ciliated. Palpi moderate, porrected, second joint with rough projecting scales above and beneath, terminal

short. Thorax with small crest. Forewings with tufts of scales on surface; 3 from or near angle, 7 separate, to termen, 8 sometimes from before angle, cell sometimes narrow in ♂. Hindwings with 3 and 4 connate, 5 approximated to 4 at base, 6 and 7 approximated towards base.

A small genus widely distributed in the Northern Hemisphere.

269. *A. neurobapta* Low.

(*Epitrichosma neurobapta* Low., Trans. Roy. Soc. S. Austr. 1908, 320.)

♂. 13-14 mm. Forewings with costa clothed with dense rough hairs from base to  $\frac{2}{3}$ . Abdomen deep ochreous-yellow, with large expansible pencil of very long light fuscous hairs from each side before middle, reaching to apex.

Q.: Cairns (Dodd); from October to December.

270. *A. lyssodes*, n.sp.

♂. 21 mm. Head and thorax whitish-ochreous. Abdomen ochreous-whitish. Forewings suboblong, slightly dilated posteriorly, costa gently arched, apex rounded-obtuse, termen slightly rounded, almost vertical; whitish-ochreous, strewn with small brownish spots and strigulae, base of scales hyaline; these indicate a basal patch with oblique somewhat curved edge, a rather broad central fascia, a blotch from tornus reaching  $\frac{2}{3}$  across wing, an elongate irregular spot beneath costa posteriorly, and a rounded spot before middle of termen, these three last and a longitudinal streak through disc irrorated with blackish. Hindwings and cilia ochreous-whitish.

N. GUINEA: Sogeri; one specimen.

39. DICHELOPA LOW.

*Dichelopa* Low., Trans. Roy. Soc. S. Austr. 1901,

76 ... .. type *panoplana*.

Antennæ in ♂ shortly ciliated. Palpi moderate, porrected or subascending, second joint with rough projecting scales above and beneath, terminal short. Thorax smooth. Forewings with 3



from angle, 7 and 8 stalked, 7 to costa. Hindwings with 3 and 4 stalked or coincident, 5 closely approximated at base, 6 and 7 stalked.

Allied to *Drachmobola*; an endemic genus.

271. *D. panoplana* Meyr.

(*Dichelia panoplana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 480; *Dichelopa dichroa* Low., Trans. Roy. Soc. S. Austr. 1901, 76.)

N.S.W.: Broken Hill (Lower), Murrurundi, Bathurst—S. Austr.: Goolwa, Port Victor (Lower), Petersburg—W. Austr.: Geraldton; in October, November, and May. I have a note that the larva feeds on *Dodonaea*, but no further particulars.

272. *D. loricata*, n.sp.

♂. 9-10 mm. Head and thorax yellow-ochreous mixed with leaden-grey, face with two whitish bars. Palpi yellow-ochreous sprinkled with grey, base and apex whitish. Abdomen dark fuscous. Forewings elongate, costa gently arched, apex obtuse, termen very obliquely rounded; bronzy-ochreous sprinkled with dark fuscous; a series of irregular silvery-whitish spots along costa; about six irregular narrow blue-leaden metallic transverse fasciæ not reaching costa, and some additional spots along dorsum and termen: cilia bronzy-ochreous, with an indistinct grey line. Hindwings with 3 absent; dark fuscous; cilia fuscous, basal third dark fuscous.

Q.: Warwick (Turner)—N.S.W.: Murrurundi; from September to November, four specimens.

273. *D. achranta*, n.sp.

♂♀. 12-14 mm. Head, palpi, and thorax light orange-yellowish, sometimes mixed with whitish. Abdomen grey. Forewings elongate, costa gently arched, apex obtuse, termen obliquely rounded; light ochreous-yellowish or orange-yellowish, in paler examples apparently suffusedly mixed with silvery-whitish, in darker specimens with numerous small silvery-whitish spots arranged in transverse series, usually with some scattered dark

fuscous specks, sometimes tending to form strigulae; sometimes a deeper orange suffusion extending as a broad more or less defined streak above middle from base to apex; costal edge tending to be whitish, sometimes very indistinctly strigulated with fuscous: cilia whitish-yellowish. Hindwings with 3 absent; grey; cilia whitish-grey, with grey subbasal shade.

S. AUST.: Petersburg, Port Lincoln; in October and November, eight specimens.

274. *D. tarsodes*, n.sp.

♂♀. 11-13 mm. Head and thorax ochreous yellow. Palpi whitish, second joint centrally suffused with ochreous-yellow. Abdomen grey. Forewings elongate, costa gently arched, apex obtuse, termen very obliquely rounded; ochreous-yellow, with numerous small silvery-whitish spots arranged in transverse series; costal edge more or less irrorated finely with grey between spots: cilia pale ochreous-yellowish. Hindwings with 3 and 4 stalked; grey; cilia whitish-grey.

N.S.W.: Mount Kosciusko, 2700 feet; in January, twelve specimens. A constant species, differing from similar varieties of the preceding variable species by the more oblique termen of forewings, and the presence of vein 3 in hindwings.

275. *D. sabulosa*, n.sp.

♂♀. 13-16 mm. Head and thorax whitish-ochreous, suffused on sides with deep ochreous. Palpi ochreous, scales above and beneath whitish. Abdomen ochreous-whitish. Forewings elongate, costa gently arched, apex obtuse, termen rounded, in ♂ rather strongly oblique, in ♀ very oblique; light ochreous-yellowish, suffusedly strigulated with brownish-ochreous or ferruginous-ochreous, in ♀ with a rather broad suffused streak of pale ground-colour beneath costa from base to beyond middle: cilia ochreous, paler towards tips. Hindwings with 3 and 4 stalked; whitish-fuscous; cilia grey-whitish.

Q.: Killarney(Turner); in October, four specimens.

## 40. DRACHMOBOLA Meyr.

*Drachmobola* Meyr., Journ. Bomb. Nat. Hist. Soc.

xvii., 978(1907) ... .. type *periastra*.

Antennæ in ♂ shortly ciliated. Palpi moderate, porrected, second joint with rough projecting scales beneath, terminal moderate or rather long. Forewings with small tufts of scales on surface; 3 from angle, 7 to termen, 8 and 9 out of 7. Hindwings with 3 and 4 connate or short-stalked, 5 approximated, 6 and 7 stalked.

Belongs to the group of *Spatalistic* and *Argyrotoxa*, in which it is immediately distinguished by the neuration. The only described species is from India.

276. *D. strigulata*, n.sp.

♂. 9-10 mm. Head whitish-ochreous, face whitish. Palpi white, second and terminal joints with faint grey subapical bands, terminal joint rather long. Antennal ciliations minute. Thorax whitish, indistinctly spotted with brownish. Abdomen grey. Forewings elongate, hardly dilated posteriorly, costa gently arched, apex obtuse, termen sinuate, somewhat oblique; whitish-ochreous tinged with brownish, strewn with brown or dark fuscous strigulæ; costa strigulated with blackish; basal patch, costal portion of central fascia, and sometimes a narrow terminal fascia more or less spotted with brownish suffusion; about twenty small round silvery-leaden-metallic spots, arranged principally in transverse rows on these markings and along dorsum and termen: cilia whitish-ochreous, barred with brownish and with a dark fuscous subbasal line except on a clear patch on upper half of termen. Hindwings whitish-ochreous strigulated with fuscous, towards costa suffused with grey, on lower part of termen with several small leaden-metallic spots; cilia pale greyish-yellowish, with interrupted dark fuscous subbasal shade.

Q.: Cairns(Dodd), in August and November, two specimens.

277. *D. ipmitis*, n.sp.

♀. 13-14 mm. Head and thorax grey mixed with pale ochreous and dark fuscous. Palpi pale ochreous suffusedly irrorated with

dark fuscous except at apex of joints, scales of second joint long, terminal joint moderate. Abdomen fuscous. Forewings elongate, costa gently arched, apex obtuse, termen somewhat sinuate, rather oblique; grey, with very irregular transverse striæ of black irroration mixed with whitish-ochreous; between these are thick irregular leaden-metallic striæ: cilia grey, irrorated with whitish and blackish points. Hindwings rather dark grey; cilia grey.

Q.: Cairns(Dodd); in November, two specimens.

#### 41. TYMBARCHA Meyr.

*Tymbarcha* Meyr., Journ. Bomb. Nat. Hist. Soc.

xviii., 622(1908) ... .. type *cerinopa*.

Antennæ in ♂ minutely ciliated. Palpi moderate, porrected, second joint with rough projecting scales above towards apex, terminal joint short. Forewings with small tufts of scales on surface; 3 and 4 stalked, 5 approximated, 7 and 8 stalked, 7 to termen. Hindwings with 3 and 4 stalked, 5 approximated, 6 and 7 closely approximated towards base.

Founded on one Indian species; a development of *Spatalistis*.

#### 278. *T. glycera*, n.sp.

♀. 13 mm. Head, palpi, thorax, and abdomen pale whitish-ochreous. Forewings elongate, costa gently arched, apex obtuse, termen sinuate, somewhat oblique; whitish-ochreous; markings ochreous, infuscated on costa, with numerous tufts of raised scales, and a few scattered black specks; basal patch indicated by two striæ, obtusely angulated in middle; central fascia distinct on costal half, moderate, terminated beneath by a black scaletuft in middle of disc; four or five small spots on costa posteriorly, and indications of striæ proceeding from these: cilia pale whitish-ochreous. Hindwings grey-whitish; cilia whitish.

Q.: Cairns(Dodd); in November, one specimen.

#### 42. SPATALISTIS Meyr.

*Spatalistis* Meyr., Journ. Bomb. Nat. Hist. Soc.

xvii., 978(1907) ... .. type *rhopica*.

Antennæ in ♂ simple or minutely ciliated. Palpi moderately long, porrected, second joint with rough projecting scales above and beneath, terminal moderate. Forewings with tufts of scales on surface; 3 and 4 stalked, 7 separate, to termen. Hindwings with 3 and 4 stalked, 5 approximated, 6 and 7 closely approximated towards base.

A genus of several Indian species; together with the four preceding genera it forms a group derivable from *Peronea*.

279. *S. nummifera*, n.sp.

♂. 11 mm. Head, palpi, and thorax light yellow. Abdomen grey, anal tuft ochreous-whitish. Forewings suboblong, costa moderately arched, apex obtuse, termen sinuate, rather oblique; clear yellow, with scattered ferruginous-orange dots and strigulae; three small patches on costa at base,  $\frac{1}{3}$ , and beyond middle mixed with fuscous and spotted with bright leaden-metallic; a patch on middle of dorsum, and a large irregular patch on tornus and lower part of termen reaching half across wing ferruginous-orange somewhat mixed with fuscous and spotted with bright leaden-metallic; several small pale metallic spots towards apex; cilia pale yellow, on tornus mixed with ferruginous-orange. Hindwings grey, rather darker posteriorly; cilia grey.

N. GUINEA: Sudest Island(Meek); one specimen.

280. *S. conchodes*, n.sp.

♂. 9 mm. Head and thorax whitish-ochreous. Palpi whitish-yellowish, becoming white towards apex. Abdomen grey. Forewings suboblong, costa moderately arched, rather bent towards base and beyond middle, apex obtuse, termen sinuate, hardly oblique; light ochreous-yellowish, with violet-silvery iridescence; basal patch with rather oblique edge, moderately broad rather oblique central fascia, a moderate fascia from  $\frac{3}{4}$  of costa to tornus, and narrow terminal fascia formed by yellow-ochreous suffusion, indistinct, marked with small tufts of scales, some of which are sprinkled with blackish; cilia light yellow. Hindwings light grey; cilia whitish-grey.

N. GUINEA: Sudest Island(Meek); one specimen.

## 43. SCOLIOPLECTA Meyr.

*Scolioplecta* Meyr., Proc. Linn. Soc. N. S. Wales,

1881, 646 ... .. type *comptana*.

Antennæ in ♂ moderately ciliated. Palpi moderate, porrected, second joint with rough projecting scales above and beneath, terminal joint short. Thorax with small crest. Forewings with tufts of scales on surface; 3 from angle, 7 separate, to termen. Hindwings with 3 and 4 connate, 5 nearly parallel, 6 from angle, 7 remote, rising from upper margin of cell considerably before angle.

An endemic genus, related to *Peronea*.

281 *S. comptana* Walk.

(*Sciaphila comptana* Walk., Cat. xxviii., 353; *Scolioplecta comptana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 646.)

♂♀. 14-20 mm. Varies considerably; the white bands of forewings are sometimes wholly suffused with rather dark fuscous. Readily distinguished from the following species by the smaller size, dark head, somewhat less oblique termen of forewings, and differently coloured hindwings.

Q.: Stradbroke Island (Turner)—N.S.W.: Murrurundi, Sydney, Blackheath (3600 feet)—Vic.: Sale (Miss M. Wise)—TASM.: Campbelltown, George's Bay—S. AUST.: Mount Lofty; from September to April.

282. *S. molybdantha*, n.sp.

♂. 22-24 mm. Head white. Palpi white, more or less sprinkled with dark fuscous. Antennal ciliations  $\frac{2}{3}$ . Thorax white, shoulders and crest suffused with dark fuscous. Abdomen dark grey, segments more or less suffused with whitish towards base, anal tuft whitish-ochreous. Forewings elongate, posteriorly dilated, costa slightly arched, apex obtuse, termen slightly rounded, rather oblique; white, with more or less marked grey or brownish transverse striæ; markings grey more or less suffused with brown, and variably sprinkled or marked with black,

especially on veins posteriorly, with numerous tufts of bluish-leadenscales tipped with black; costa variably strigulated with blackish and white; basal patch rather large, outer edge oblique, irregular; central fascia moderately broad, slightly curved, oblique; an apical patch, its edge running from  $\frac{2}{3}$  of costa to tornus, slightly concave; a white terminal line dotted with black: cilia white, basal third grey tipped with blackish, with two posterior blackish-grey lines. Hindwings grey, darker posteriorly; cilia whitish, with basal third dark grey, and grey postmedian shade.

W. AUST.: Waroona (Berthoud); in January and February, three specimens.

#### 44. PARASTRANGA, n.g.

Antennæ in ♂ shortly ciliated. Palpi long, porrected, second joint with dense projecting scales above and beneath diminishing to apex, terminal joint moderate. Forewings with slight scale-tufts on surface; 3 from angle, 7 separate, to termen, 8 and 9 stalked. Hindwings with 3 and 4 connate, 5 approximated, 6 and 7 closely approximated towards base.

An interesting form, derived from *Peronea*.

#### 283. *P. macrogona*, n.sp.

♂♀. 14-16 mm. Head and thorax whitish-ochreous, in ♂ suffused with light grey. Palpi grey more or less mixed with light brownish-ochreous, towards base white. Abdomen ochreous-whitish mixed with light grey. Forewings elongate, rather dilated posteriorly, costa towards base gently arched, posteriorly nearly straight, apex obtuse, termen straight, oblique; light brownish, sometimes tinged with reddish, more or less irrorated with whitish-ochreous, with a few blackish specks; costa and dorsum shortly strigulated with blackish irroration; basal patch indicated by some small blackish strigulæ; a very elongate-triangular ferruginous-reddish patch, more or less suffusedly mixed with grey and sprinkled with black, extending along costa from before  $\frac{1}{3}$  to near apex, its apex reaching nearly to middle of disc and sometimes marked with black; sometimes this patch

is edged with whitish suffusion; an interrupted black terminal line or series of strigulae, suffused with ferruginous-reddish: cilia pale grey, above apex with a whitish patch. Hindwings light grey; cilia whitish-grey, with darker subbasal line.

W. AUST.: Perth, Albany; in October, six specimens.

#### 45. EBODA Walk.

*Eboda* Walk., Cat. xxxv., 1804(1866) ... type *smaragdinana*.

Antennae in ♂ minutely ciliated. Palpi moderate, subascending, second joint with dense projecting scales towards apex beneath, terminal joint moderate. Thorax without crest. Forewings with tufts of scales on surface; 3 and 4 stalked, 7 separate, to termen (sometimes indefinite). Hindwings with 4 absent, 5 somewhat approximated, 6 and 7 closely appressed towards base.

A development of *Peronea*; two or three Indian species are known.

#### 284. *E. smaragdinana* Walk.

(*Eboda smaragdinana* Walk., Cat. xxxv., 1805; Meyr., Journ. Bomb. Nat. Hist. Soc. xvi., 587.)

♂♀. 14-17 mm. Forewings deep emerald-green; costa dotted with rosy-whitish; a round spot in disc beyond middle and bar connecting it with dorsum outlined with whitish; a leaden-grey terminal stripe preceded by a white line; sometimes these markings are suffused with brownish or dark grey, and there is a ternal brown and grey blotch. Hindwings dark grey.

SOLOMON ISLES: Choiseul, Isabel I. (Meek)—NEW GUINEA. Also from India and Ceylon; probably attached to some tree or shrub of cultivation.

#### 285. *E. exeristis*, n.sp.

♂♀. 15-16 mm. Head light brownish, crown suffused with whitish-ochreous, lower half of face whitish. Palpi whitish, with a line of blackish scales on side, towards apex sprinkled with dark fuscous. Thorax light brownish. Abdomen fuscous or dark fuscous. Forewings suboblong, costa abruptly arched and rough-scaled near base, beyond middle with an obtuse rough-



scaled prominence, apex rounded off, termen vertical, rounded beneath; termination of 7 indefinite; light brownish or reddish-fuscous, irregularly clouded with darker towards dorsum; some small dark fuscous spots on costa, especially towards posterior prominence, and in ♂ a darker fuscous patch extending along costa from base to prominence, suffused with bronzy-green towards each end; dorsum strigulated with dark fuscous; some small scattered tufts of whitish and black scales in disc; two blackish dots above and below fold about  $\frac{1}{4}$ , and two others about middle, in ♂ distinct and edged with whitish suffusion, in ♀ less marked; a darker fuscous marginal streak round apex and termen; cilia whitish-ochreous mixed with light reddish-fuscous and grey. Hindwings dark fuscous, in ♂ lighter and tinged with bronzy-yellow except towards apex; cilia greyish.

Q.: Brisbane(Turner); in April, four specimens. In this species the apex of forewings is obliquely rounded so that it is impossible to say where the actual apex is, and the termination of 7 is therefore indefinite; in *E. smaragdina* the apex is well-defined, and 7 clearly ends in termen; the two species being closely allied, and having all other structures identical, we are justified in this instance in classing the indefinite termination with the terminal.

## 46. PERONEA Curt.

<i>Peronea</i> Curt., Brit. Ent. i., 15(1824) ...	...	type <i>crisana</i> .
<i>Acalla</i> Hb., Verz. 383(1826) ...	...	type <i>hastiana</i> .
<i>Acleris</i> Hb., Verz. 384(1826) ...	..	type <i>aspersana</i> .
<i>Oxygrapha</i> Hb., Verz. 386( 826) ...	...	type <i>literana</i> .
<i>Croesia</i> Hb., Verz. 392(1826) ...	...	type <i>holmiana</i> .
<i>Teras</i> Tr., Schmett. Eur. vii., 233(1829) ...	...	type <i>caudana</i> .
<i>Phricanthes</i> Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 636 ... ..	...	type <i>asperana</i> .
<i>Polylopha</i> Low., Trans. Roy. Soc. S. Aust., 1901, 71 ... ..	...	type <i>epidesma</i> .

Antennæ in ♂ shortly ciliated. Palpi moderately long, pro-rected, second joint with projecting scales above and beneath, terminal moderate. Thorax sometimes with crest. Forewings

with tufts of scales on surface, 3 and 4 sometimes stalked, 7 separate, to costa. Hindwings with 3 and 4 connate or short-stalked, 5 approximated to 4, 6 and 7 closely approximated towards base.

A genus of some extent, principally characteristic of the Northern Hemisphere and South America. Many of the species are remarkable for their great variability. The generic synonymy is only partially given above.

286. *P. asperana* Meyr.

(*Phricanthes asperana* Meyr., Proc. Linn. Soc. N.S. Wales, 1881, 636; *Polylopha elaphris* Low., Trans. Roy. Soc. S. Austr. 1908, 319.)

♂♀. 13-19 mm. Forewings with 7 and 8 connate or closely approximated, but not stalked as stated.

Q.: Cairns (Dodd), Rockhampton (Barnard), Stradbroke I., Mount Tambourine (Turner)—N.S.W.: Newcastle, Sydney; from October to January.

287. *P. flexilineana* Walk.

(*Sciaphila flexilineana* Walk., Cat. xxviii., 345; *Phricanthes macroura* Low., Trans. Roy. Soc. S. Austr. 1908, 322.)

♂♀. 18-22 mm. Forewings elongate, much dilated posteriorly; grey mixed with whitish, with scattered black dots and strigulæ; costal edge black margined beneath with brown, and marked with pairs of white strigulæ; an irregular black longitudinal streak above middle from base to near apex, broken into five or six segments, more or less edged with whitish suffusion above and partially margined with brown beneath; a spot of dark grey suffusion in disc beneath middle; two or three leaden-grey striæ posteriorly. Hindwings rather dark fuscous.

N G.: St. Aignan Island (Meek)—QUEENSLAND (Lower); from August to October. Also from the Philippines, India, and Ceylon.

288. *P. epidesma* Low.

(*Polylopha epidesma* Low., Trans. Roy. Soc. S. Austr. 1901, 71; *Oxygrapha porpaciæ* Meyr., Journ. Bomb. N. H. Soc. xviii., 625.)

♂♀. 16-19 mm. Forewings elongate, variably mixed with grey and whitish, with numerous transverse ridges of raised scales; sometimes an irregular black patch in disc before middle, or a black streak along posterior part of fold, or a broad streak of dark fuscous suffusion along dorsum throughout, or a patch of blackish-grey suffusion on costa about  $\frac{2}{3}$ , sometimes extended so as to occupy entire apical  $\frac{2}{5}$  of wing and tinged with purplish, or these markings may be variously combined. Hindwings dark fuscous, lighter anteriorly.

Q.: Cairns, Townsville(Dodd), Duaringa(Barnard), Brisbane (Turner); from November to January. Also from Siam and Ceylon. Very variable; differs from the two preceding species in the forewings not being dilated posteriorly.

#### 47. PALEOTOMA Meyr.

*Paleotoma* Meyr., Proc. Linn. Soc. N. S. Wales,

1881, 422 ... .. type *stypfelana*.

Antennæ in ♂ strongly ciliated. Palpi long, porrected, second joint arched upwards, with dense rather appressed scales, terminal joint in ♂ moderate, in ♀ long. Thorax without crest. Forewings with tufts of scales on surface, 3 from angle, 7 separate, to termen. Hindwings with 3 and 4 remote, nearly parallel, 4 from angle, 5 approximated to 4 at base, 6 and 7 stalked.

An early form, allied to *Peronea*; endemic.

#### 289. *P. stypfelana* Meyr.

(*Paleotoma stypfelana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 423.)

N.S.W.: Sydney—VIC.: Gisborne (Lyell), Birchip (Goudie), Melbourne—S. AUST.: Mount Lofty—W. AUST.: Geraldton; from September to January. Larva feeding in galls formed of a metamorphosed shoot of *Eucalyptus*.

#### 48. MICTONEURA Meyr.

*Mictoneura* Meyr., Proc. Linn. Soc. N. S. Wales,

1881, 419 ... .. type *flexanimana*.

Antennæ in ♂ dentate, moderately ciliated, basal joint with apical scale-tooth anteriorly. Palpi long, porrected, second joint above with projecting scales diminishing to apex, terminal joint in ♂ moderate, in ♀ long. Thorax with crest. Forewings with tufts of scales on surface; 3 from angle, 7 to termen, 8 and 9 stalked, closely approximated to 7 at base. Hindwings with 3 and 4 connate or short-stalked, 5 approximated to 4 at base, 6 and 7 closely approximated towards base.

An interesting endemic genus, clearly indicating affinity with the *Argyroploce*-group of the *Eucosmidae*, from which I consider the *Tortricidae* to have been derived; the genus *Articolla* in that group is structurally very similar, with 8 and 9 of forewings stalked.

290. *M. flexanimana* Meyr.

(*Mictoneura flexanimana* Meyr., Proc. Linn. Soc. N. S. Wales, 1881, 420.)

The colouring would have been better described as fuscous with the base of all scales whitish, producing the effect of fine striation.

N.S.W.: Newcastle, Sydney; from September to December.

This concludes the family *Tortricidae*; the remaining families will be given in a second instalment to follow shortly, and a full index to all generic and specific names in both instalments will accompany this.